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Dr. BUCHAN.

DOMESTIC MEDICINE,

&c. &c.

DOMESTIC MEDICINE;

OR,

A TREATISE

ON THE

PREVENTION AND CURE OF DISEASES

BY REGIMEN AND SIMPLE MEDICINES:

containing

OBSERVATIONS

ON THE

COMPARATIVE ADVANTAGES OF VACCINE INOCULATION,

With Instructions for performing the Operations:

AN ESSAY,

ENABLING

RUPTURED PERSONS TO MANAGE THEMSELVES;

WITH

Engravings of Bandages,

WHICH EVERY PERSON MAY PREPARE FOR HIMSELF:

and

A FAMILY HERBAL.

BY WILLIAM BUCHAN, M. D.

OF THE ROYAL COLLEGE OF PHYSICIANS, EDINBURGH.

To which are added,

SUCH USEFUL DISCOVERIES IN MEDICINE AND SURGERY

As have transpired since the Demise of the Author.

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DOMESTIC MEDICINE.

PART I.

Of the General Causes of Diseases.

CHAPTER I.

OF CHILDREN.

THE better to trace diseases from their original causes, we shall take a view of the common treatment of mankind in the state of infancy. In this period of our lives, the foundations of a good or bad constitution are generally laid; it is therefore of importance, that parents be well acquainted with the various causes which may injure the health of their offspring.

It appears from the annual registers of the dead, that almost one half of the children born in Great Britain die under twelve years of age. To many, indeed, this may appear a natural evil; but on due examination, it will be found to be one of our own creating. Were the death of infants a natural evil, other animals would be as liable to die young as man; but this we find is by no means the case.

It may seem strange that man, notwithstanding his superior reason, should fall so far short of other animals in the management of his young; but our surprise will soon cease, if we consider that brutes, guided by instinct, never err in this respect; while man, trusting solely to art, is seldom right. Were a catalogue of those infants who perish annually by art alone exhibited to public view, it would astonish most people.

If parents are above taking care of their children, others must be employed for that purpose: these will always endeavour to recommend themselves by the appearance of extraordinary skill and address. By this means such a number of unnecessary and destructive articles have been introduced into the diet, clothing, &c. of infants, that it is no wonder so many of them perish.

Nothing can be more preposterous than a mother who thinks it below her to take care of her own child, or who is so ignorant as not to know what is proper to be done for it. If we search Nature throughout, we cannot find a parallel to this. Every other animal is the nurse of its own offspring, and they thrive accordingly. Were the brutes to bring up their young by proxy, they would share the same fate with those of the human species.

We mean not, however, to impose it as a task upon every mother to suckle her own child. This, whatever speculative writers may allege, is in some cases impracticable, and would inevitably prove

destructive both to the mother and child. Women of delicate constitutions, subject to hysteric fits, or other nervous affections, make very bad nurses: and these complaints are now so common, that it is rare to find a woman of fashion free from them; such women, therefore, supposing them willing, are often unable to suckle their own children.

Almost every mother would be in a condition to give suck, did mankind live agreeably to Nature; but whoever considers how far many mothers deviate from her dictates, will not be surprised to find some of them unable to perform that necessary office. Mothers who do not eat a sufficient quantity of solid food, nor enjoy the benefit of free air and exercise, can neither have wholesome juices themselves, nor afford proper nourishment to an infant. Hence children who are suckled by delicate women, either die young, or continue weak and sickly all their lives.

When we say that mothers are not always in a condition to suckle their own children, we would not be understood as discouraging that practice. Every mother that can, ought certainly to perform so tender and agreeable an office. But suppose it to be out of her power, she may, nevertheless, be of great service to her child. The business of nursing is by no means confined to giving suck. To a woman who abounds with milk, this is the easiest part of it. Numberless other offices are necessary for a child which the mother ought at least to see done.

Many advantages would arise to society, as well as to individuals, from mothers suckling their own children. A mother who abandons the fruit of her womb, as soon as it is born, to the sole care of an hireling, hardly deserves that name. A child, by being brought up under the mother's eye, not only secures her affection, but may reap all the advantages of a parent's care, though it be suckled by another. How can a mother be better employed than in superintending the nursery? This is at once the most delightful and important office; yet the most trivial business or insipid amusements are often preferred to it! A strong proof both of the bad taste and wrong education of modern females.

It is indeed to be regretted, that more care is not bestowed in teaching the proper management of children to those whom Nature has designed for mothers. This, instead of being made the principle, is seldom considered as any part of female education. Is it any wonder, when females so educated come to be mothers, that they should be quite ignorant of the duties belonging to that character? However strange it may appear, it is certainly true, that many mothers, and those of fashion too, are as ignorant, when they have brought a child into the world, of what is to be done for it, as the infant itself. Indeed, the most ignorant of the sex are generally reckoned most knowing in the business of nursing. Hence, sensible people become the dupes of ignorance and superstition; and the nursing of children, instead of being conducted by reason, is the result of whim and caprice.

Tacitus, the celebrated Roman historian, complains greatly of the degeneracy of the Roman ladies in his time, with regard to the care

of their offspring. He says that in former times, the greatest women in Rome used to account it their chief glory to keep the house and attend their children; but that now the young infant was committed to the sole care of some poor Grecian wench, or other menial servant.—We are afraid, wherever luxury and effeminacy prevail, there will be too much ground for this complaint.

Were the time that is generally spent by females in the acquisition of trifling accomplishments employed in learning how to bring up their children; how to dress them so as not to hurt, cramp, or confine their motions; how to feed them with wholesome and nourishing food; how to exercise their tender bodies, so as best to promote their growth and strength;—were these made the objects of female instruction, mankind would derive the greatest advantages from it. But while the education of females implies little more than what relates to dress and public show, we have nothing to expect from them but ignorance even in the most important concerns.

Did mothers reflect on their own importance, and lay it to heart, they would embrace every opportunity of informing themselves of the duties which they owe to their infant offspring. It is their province, not only to form the body, but also to give the mind its most early bias. They have it very much in their power to make men healthy or valetudinary; useful in life, or the pests of society.

But the mother is not the only person concerned in the management of children. The father has an equal interest in their welfare and ought to assist in every thing that respects either the improvement of the body or mind.

It is a pity that the men should be so inattentive to this matter. Their negligence is one reason why females know so little of it. Women will ever be desirous to excel in such accomplishments as recommend them to the other sex. But men generally keep at such a distance from even the smallest acquaintance with the affairs of the nursery, that many would reckon it an affront, were they supposed to know any thing of them. Not so, however, with the kennel or the stables: a gentleman of the first rank is not ashamed to give directions concerning the management of his dogs or horses, yet would blush were he surprised in performing the same office for that being who derived its existence from himself, who is the heir of his fortunes, and the future hope of his country.

Nor have physicians themselves been sufficiently attentive to the management of children: this has been generally considered as the sole province of old women, while men of the first character in physic have refused to visit infants even when sick. Such conduct in the faculty has not only caused this branch of medicine to be neglected, but has also encouraged the other sex to assume an absolute title to prescribe for children in the most dangerous diseases. The consequence is, that a physician is seldom called till the good women have exhausted all their skill; when his attendance can only serve to divide the blame, and appease the disconsolate parents.

Nurses should do all in their power to prevent diseases; but when a child is taken ill, some person of skill ought immediately to be con-

sulted. The diseases of children are generally acute, and the least delay is dangerous.

Were physicians more attentive to the diseases of infants, they would not only be better qualified to treat them properly when sick, but likewise to give useful directions for their management when well. The diseases of children are by no means so difficult to be understood as many imagine. It is true, children cannot tell their complaints; but the causes of them may be pretty certainly discovered by observing the symptoms, and putting proper questions to the nurses. Besides, the diseases of infants being less complicated, are easier cured than those of adults.

The common opinion, that the diseases of infants are hard to discover and difficult to cure, has deterred many physicians from paying that attention to them which they deserve. I can, however, from experience declare, that this opinion is without foundation: and that the diseases of infants are neither so difficult to discover, nor so ill to cure, as those of adults.

It is really astonishing, that so little attention should in general be paid to the preservation of infants. What labour and expence are daily bestowed to prop an old tottering carcase for a few years, while thousands of those who might be useful in life, perish without being regarded! Mankind are too apt to value things according to their present, not their future, usefulness. Though this is of all others the most erroneous method of estimation, yet upon no other principle is it possible to account for the general indifference with respect to the death of infants.

OF DISEASED PARENTS.

One great source of the diseases of children is, the UNHEALTHINESS OF PARENTS. It would be as reasonable to expect a rich crop from a barren soil, as that strong and healthy children should be born of parents whose constitutions have been worn out with intemperance or disease.

An ingenious writer (Rosseau) observes, that on the constitution of mothers depends originally that of their offspring. No one who believes this, will be surprised, on a view of the female world, to find diseases and death so frequent among children. A delicate female, brought up within doors, an utter stranger to exercise and open air, who lives on tea and other slops, may bring a child into the world, but it will hardly be fit to live. The first blast of disease will nip the tender plant in the bud; or should it struggle through a few years' existence, its feeble frame, shaken with convulsions from every trivial cause, will be unable to perform the common functions of life, and prove a burden to society.

If to the delicacy of mothers we add the irregular lives of fathers, we shall see further cause to believe that children are often hurt by the constitution of their parents. A sickly frame may be originally induced by hardships or intemperance, but chiefly by the latter. It is impossible that a course of vice should not spoil the best constitution: and, did the evil terminate here, it would be a just punish-

ment for the folly of the sufferer; but when once a disease is contracted and rivetted in the habit, it is entailed on posterity. What a dreadful inheritance is the gout, the scurvy, or the king's evil, to transmit to our offspring! how happy had it been for the heir of many a great estate, had he been born a beggar, rather than to inherit his father's fortunes at the expence of inheriting his diseases!

A person labouring under any incurable malady ought not to marry. He thereby not only shortens his own life, but transmits misery to others; but when both parties are deeply tainted with the scrophula, the scurvy, or the like, the effects must be still worse. If such have any issue, they must be miserable indeed. Want of attention to these things, in forming connexions for life, has rooted out more families than plague, famine or the sword; and as long as these connexions are formed from mercenary views, the evil will be continued.

In our matrimonial contracts, it is amazing so little regard is had to the health and form of the object. Our sportsmen know that the generous courser cannot be bred out of the foundered jade, nor the sagacious spaniel out of the snarling cur. This is settled upon immutable laws. The man who marries a woman of a sickly constitution, and descended of unhealthy parents, whatever his views may be, cannot be said to act a prudent part. A diseased woman may prove fertile; should this be the case, the family must become an infirmary: what prospect of happiness the father of such a family has, we shall leave any one to judge. The Jews, by their laws, were, in certain cases, forbid to have any manner of commerce with the diseased; and indeed to this all wise legislators ought to have a special regard.

Such children as have the misfortune to be born of diseased parents, will require to be nursed with greater care than others. This is the only way to make amends for the defects of constitution; and it will often go a great length. A healthy nurse, wholesome air, and sufficient exercise, will do wonders. But when these are neglected, little is to be expected from any other quarter. The defects of constitution cannot be supplied by medicine.

Those who inherit any family disease ought to be very circumspect in their manner of living. They should consider well the nature of such disease, and guard against it by a proper regimen. It is certain, that family diseases have often, by proper care, been kept off for one generation; and there is reason to believe, that, by persisting in the same course, such diseases might at length be wholly eradicated. This is a subject very little regarded, though of the greatest importance. Family constitutions are as capable of improvement as family estates; and the libertine who impairs the one does greater injury to his posterity than the prodigal who squanders away the other.

OF THE CLOTHING OF CHILDREN.

The clothing of an infant is so simple a matter, that it is surprising how any person should err in it; yet many children lose their lives, and others are deformed, by inattention to this article.

Nature knows no use of clothes to an infant, but to keep it warm. All that is necessary for this purpose is to wrap it in a soft loose covering. Were a mother left to the dictates of Nature alone, she would certainly pursue this course. But the business of dressing an infant has long been out of the hands of mothers, and has at last become a secret which none but adepts pretend to understand.

From the most early ages it has been thought necessary, that a woman in labour should have some person to attend her. This in time became a business; and, as in all others, those who were employed in it strove to outdo one another in the different branches of their profession. The dressing of a child came of course to be considered as the midwife's province, who no doubt imagined, that the more dexterity she could shew in this article, the more her skill would be admired. Her attempts were seconded by the vanity of parents, who, too often desirous of making a shew of the infant as soon as it was born, were ambitious to have as much finery heaped upon it as possible. Thus it came to be thought as necessary for a midwife to excel in bracing and dressing an infant, as for a surgeon to be expert in applying bandages to a broken limb; and the poor child, as soon as it came into the world, had as many rollers and wrappers applied to its body, as if every bone had been fractured in the birth; while these were often so tight, as not only to gall and wound its tender frame, but even to obstruct the motion of the heart, lungs, and other organs necessary for life.

In most parts of Britain the practice of rolling children with so many bandages is now, in some measure, laid aside; but it would still be a difficult task to persuade the generality of mankind, that the shape of an infant does not entirely depend on the care of the midwife. So far, however, are all her endeavours to mend the shape from being successful, that they constantly operate the contrary way, and mankind become deformed in proportion to the means used to prevent it. How little deformity of body is to be found among uncivilized nations? So little indeed, that it is vulgarly believed they put all their deformed children to death. The truth is, they hardly know such a thing as a deformed child. Neither should we, if we followed their example. Savage nations never think of manacling their children. They allow them the full use of every organ, carry them abroad in the open air, wash their bodies daily in cold water, &c. By this management, their children become so strong and hardy, that by the time our puny infants get out of the nurse's arms, theirs are able to shift for themselves.

Among brute animals, no art is necessary to procure a fine shape. Though many of them are extremely delicate when they come into the world, yet we never find them grow crooked for want of swaddling bands. Is Nature less generous to the human kind? No: but we take the business out of Nature's hands.

Not only the analogy of other animals, but the very feelings of infants tell us, they ought to be kept easy and free from all pressure. They cannot indeed tell their complaints; but they can shew signs of pain; and this they never fail to do, by crying when hurt by their

clothes. No sooner are they freed from their bracings, than they seem pleased and happy; yet, strange infatuation! the moment they hold their peace, they are again committed to their chains.

If we consider the body of an infant as a bundle of soft pipes, replenished with fluids in continual motion, the danger of pressure will appear in the strongest light. Nature, in order to make way for the growth of children, has formed their bodies soft and flexible; and lest they should receive any injury from pressure in the womb, has surrounded the *fætus* every where with fluids. This shews the care which Nature takes to prevent all unequal pressure on the bodies of infants, and to defend them against every thing that might in the least cramp or confine their motions.

Even the bones of an infant are so soft and cartilaginous, that they readily yield to the slightest pressure, and easily assume a bad shape, which can never after be remedied. Hence it is, that so many people appear with high shoulders, crooked spines, and flat breasts, who were as well proportioned at their births as others, but had the misfortune to be squeezed out of shape by the application of stays and bandages.

Pressure, by obstructing the circulation, likewise prevents the equal distribution of nourishment to the different parts of the body, by which means the growth becomes unequal. One part grows too large, while another remains too small; and thus in time the whole frame becomes disproportioned and mishapen. To this we must add, that when a child is cramped in its clothes, it naturally shrinks from the part that is hurt; and by putting its body into unnatural postures, it becomes deformed by habit.

Deformity of body may indeed proceed from weakness or disease; but, in general, it is the effect of improper clothing. Nine-tenths, at least, of the deformity among mankind must be imputed to this cause. A deformed body is not only disagreeable to the eye, but by a bad figure both the animal and vital functions must be impeded, and of course health impaired. Hence few people remarkably mishapen are strong or healthy.

The new motions which commence at the birth, as the circulation of the whole mass of blood through the lungs, respiration, the peristaltic motion, &c. afford another strong argument for keeping the body of an infant free from all pressure. These organs, not having been accustomed to move, are easily stopped; but when this happens, death must ensue. Hardly any method could be devised more effectually to stop these motions, than bracing the body too tight with rollers and bandages. Were these to be applied in the same manner to the body of an adult for an equal length of time, they would hardly fail to hurt the digestion and make him sick. How much more hurtful they must prove to the tender bodies of infants, we shall leave any one to judge.

Whoever considers these things will not be surprised that so many children die of convulsions soon after the birth. These fits are generally attributed to some inward cause; but in fact they oftener

proceed from our own imprudent conduct. I have known a child seized with convulsion-fits soon after the midwife had done swaddling it, who, upon taking off the rollers and bandages, was immediately relieved, and never had the disease afterwards. Numerous examples of this might be given, were they necessary.

It would be safer to fasten the clothes of an infant with strings than pins, as these often gall and irritate their tender skins, and occasion disorders. Pins have been found sticking above half an inch into the body of a child, after it had died of convulsion-fits, which in all probability proceeded from that cause.

Children are not only hurt by the tightness of their clothes, but also by the quantity. Every child has some degree of fever after the birth; and if it be loaded with too many clothes, the fever must be increased. But this is not all; the child is generally laid in bed with the mother, who is often likewise feverish; to which we may add the heat of the bed-chamber, the wines, and other heating things, too frequently given to children immediately after the birth. When all these are combined, which does not seldom happen, they must increase the fever to such a degree as will endanger the life of the infant.

The danger of keeping infants too hot will further appear, if we consider that, after they have been for some time in the situation mentioned above, they are often sent into the country to be nursed in a cold house. Is it any woder, if a child, from such a transition, catches a mortal cold, or contracts some other fatal disease? When an infant is kept too hot, its lungs, not being sufficiently expanded, are apt to remain weak and flaccid for life; hence proceed coughs, consumptions, and other diseases of the breast.

It would answer little purpose to specify the particular species of dress proper for an infant: these will always vary in different countries, according to custom, and the humour of parents. The great rule to be observed is, *That a child have no more clothes than are necessary to keep it warm, and that they be quite easy for its body.*

Stays are the very bane of infants. A volume would not suffice to point out all the bad effects of this ridiculous piece of dress both on children and adults. The madness in favour of stays seems, however, to be somewhat abated; and it is to be hoped the world will, in time, become wise enough to know that the human shape does not solely depend upon whale-bone and bend leather.

I shall only add with respect to the clothes of children, that they ought to be kept thoroughly clean. Children perspire more than adults; and if their clothes be not frequently changed, they become very hurtful. Dirty clothes not only gall and fret the tender skins of infants, but likewise occasion ill smells; and what is worse, tend to produce vermin and cutaneous diseases.

Cleanliness is not only agreeable to the eye, but tends greatly to preserve the health of children. It promotes the perspiration, and, by that means, frees the body from superfluous humours, which, if retained, could not fail to occasion diseases. No mother or nurse can have any excuse for allowing a child to be dirty. Poverty may

oblige her to give it coarse clothes; but if she does not keep them lean, it must be her own fault.

OF THE FOOD OF CHILDREN.

Nature not only points out the food proper for an infant, but actually prepares it. This, however, is not sufficient to prevent some, who think themselves wiser than Nature, from attempting to bring up their children without her provision. Nothing can shew the disposition which mankind have to depart from Nature more than their endeavouring to bring up children without the breast. The mother's milk, or that of a healthy nurse, is unquestionably the best food for an infant. Neither Art nor Nature can afford a proper substitute for it. Children may seem to thrive for a few months without the breast; but when teething, the small-pox, and other diseases incident to childhood, come on, they generally perish.

A child, soon after the birth, shews an inclination to suck; and there is no reason why it should not be gratified. It is true, the mother's milk does not always come immediately after the birth; but this is the way to bring it: besides, the first milk that the child can squeeze out of the breast answers the purpose of cleansing better than all the drugs in the apothecary's shop, and at the same time prevents inflammations of the breasts, fevers, and other diseases incident to mothers.

It is strange how people came to think that the first thing given to a child should be drugs. This is beginning with medicine by times, and no wonder if they generally end with it. It sometimes happens, indeed, that a child does not discharge the *meconium* so soon as could be wished; this has induced physicians, in such cases, to give something of an opening nature to cleanse the first passages. Midwives have improved upon this hint, and never fail to give syrups, oils, &c. whether they be necessary or not. Cramming an infant with such indigestible stuff as soon as it is born, can hardly fail to make it sick, and is more likely to occasion diseases than to prevent them. Children are seldom long after the birth without having passage both by stool and urine; though these evacuations may be wanting for some time without any danger. But if children must have something before they be allowed the breast, let it be a little thin water pap, to which may be added an equal quantity of new milk; or rather water alone, with the addition of a little raw sugar. If this be given without any wines or spiceries, it will neither heat the blood, load the stomach, nor occasion gripes.

Upon the first sight of an infant, almost every person is struck with the idea of its being weak, feeble, and wanting support. This naturally suggests the need of cordials. Accordingly wines are universally mixed with the first food of children. Nothing can be more fallacious than this way of reasoning, or more hurtful to infants than the conduct founded upon it. Children require very little food for some time after the birth, and what they receive should be thin, weak, light, and of a cooling quality. A very small quantity of wine is sufficient to heat and inflame the blood of an infant; but every

person conversant in these matters must know, that most of the diseases of infants proceed from the heat of their humours.

If the mother or nurse has enough of milk, the child will need little or no other food before the third or fourth month. It will then be proper to give it, once or twice a day, a little of some food that is easy of digestion, as water-pap, milk-pottage, weak broth with bread in it, and such like. This will ease the mother, will accustom the child by degrees to take food, and will render the weaning both less difficult and less dangerous. All great and sudden transitions are to be avoided in nursing. For this purpose, the food of children ought not only to be simple, but to resemble, as nearly as possible, the properties of milk. Indeed milk itself should make a principal part of their food, not only before they are weaned, but for some time after.

Next to milk, we would recommend good light bread. Bread may be given to a child as soon as it shews an inclination to chew; and it may at all times be allowed as much plain bread as it will eat. The very chewing of bread will promote the cutting of the teeth, and the discharge of saliva, while, by mixing with the nurse's milk in the stomach, it will afford an excellent nourishment. Children discover an early inclination to chew whatever is put into their hands. Parents observe the inclination, but generally mistake the object. Instead of giving the child something which may at once exercise its gums and afford it nourishment, they commonly put into its hands a piece of hard metal, or impenetrable coral. A crust of bread is the best gum-stick. It not only answers the purpose better than any thing else, but has the additional properties of nourishing the child, and carrying the saliva down to the stomach, which is too valuable a liquor to be lost.

Bread, besides being used dry, may be many ways prepared into food for children. One of the best methods is to boil it in water, afterwards pouring the water off, and mixing with the bread a proper quantity of new milk unboiled. Milk is both more wholesome and nourishing this way than boiled, and is less apt to occasion costiveness. For a child farther advanced, bread may be mixed in veal or chicken broth, made into puddings, or the like. Bread is a proper food for children at all times, provided it be plain, made of wholesome grain, and well fermented; but when enriched with fruits, sugars, or such things, it becomes very unwholesome.

It is soon enough to allow children animal food when they have got teeth to eat it. They should never taste it till after they are weaned, and even then they ought to use it sparingly. Indeed, when children live wholly on vegetable food, it is apt to sour on their stomachs; but, on the other hand, too much flesh heats the body, and occasions fevers and other inflammatory diseases. This plainly points out a due mixture of animal and vegetable food as most proper for children.

Few things prove more hurtful to infants than the common method of sweetening their food. It entices them to take more than they ought to do, which makes them grow fat and bloated. It is pretty certain, if the food of children were quite plain, that they would never take more than enough. Their excesses are entirely owing to nurses.

If a child be gorged with food at all hours, and enticed to take it, by making it sweet and agreeable to the palate, is it any wonder that such a child should in time be induced to crave more food than it ought to have?

Children may be hurt by too little as well as too much food. After a child is weaned, it ought to be fed four or five times a day, but should never be accustomed to eat in the night; neither should it have too much at a time. Children thrive best with small quantities of food frequently given. This neither overloads the stomach, nor hurts the digestion, and is certainly most agreeable to nature.

Writers on nursing have inveighed with such vehemence against giving children too much food, that many parents, by endeavouring to shun that error, have run into the opposite extreme, and ruined the constitutions of their children. But the error of pinching children in their food is more hurtful than the other extreme. Nature has many ways of relieving herself when overcharged; but a child who is pinched with hunger will never become a strong or healthy man. That errors are frequently committed on both sides, we are ready to acknowledge; but where one child is hurt by the quantity of its food, ten suffer from the quality. This is the principal evil, and claims our strictest attention.

Many people imagine, that the food which they themselves love cannot be bad for their children; but this notion is very absurd. In the more advanced periods of life, we often acquire an inclination for food which when children we could not endure. Besides, there are many things that by habit may agree very well with the stomach of a grown person, which would be hurtful to a child; as high-seasoned, salted, and smoke dried provisions, &c. It would also be improper to feed children with fat meat, strong broths, rich soups, or the like.

All strong liquors are hurtful to children. Some parents teach their children to guzzle ale, and other fermented liquors, at every meal. Such a practice cannot fail to do mischief. These children seldom escape the violence of the small-pox, measles, hooping cough, or some inflammatory disorder. Milk, water, butter-milk, or whey, are the most proper for children to drink. If they have any thing stronger, it may be fine small beer, or a little wine mixed with water. The stomachs of children can digest well enough without the assistance of warm stimulants; being naturally hot, they are easily hurt by every thing of a heating quality.

Few things are more hurtful to children than unripe fruits. They weaken the powers of digestion, and sour and relax the stomach, by which means it becomes a proper nest for insects. Children indeed shew a great inclination for fruit, and I am apt to believe, that if good ripe fruit were allowed them in proper quantity, it would have no bad effects. We never find a natural inclination wrong, if properly regulated. Fruits are generally of a cooling nature, and correct the heat and acrimony of the humours. This is what most children require; only care should be taken lest they exceed. Indeed the best way to prevent children from going to excess in the use of fruit, or eating that which is bad, is to allow them a proper quantity of what is

good. Children are always sickly in the fruit season, which may be thus accounted for: two-thirds of the fruit which comes to market in this country is really unripe; and children not being in a condition to judge for themselves, eat whatever they can lay their hands upon, which often proves little better than a poison to their tender bowels.

Roots which contain a crude viscid juice should be sparingly given to children. They fill the body with gross humours, and tend to produce eruptive diseases. This caution is peculiarly necessary for the poor: glad to obtain at a small price what will fill the bellies of their children, they stuff them two or three times a day with crude vegetables. Children had better eat a smaller quantity of food which yields a wholesome nourishment, than be crammed with what their digestive powers are unable properly to assimilate.

Butter ought likewise to be sparingly given to children. It both relaxes the stomach, and produces gross humours. Indeed, most things that are fat or oily have this effect. Butter when salted becomes still more hurtful. Instead of butter, so liberally given to children in most parts of Britain, we would recommend honey. Honey is not only wholesome, but cooling, cleansing, and tends to sweeten the humours. Children who eat honey are seldom troubled with worms: they are also less subject to cutaneous diseases; as itch, scabbed head, &c.

Many people err in thinking that the diet of children ought to be altogether moist. When children live entirely upon slops, it relaxes their solids, renders them weak, and disposes them to the rickets, the scrophula, and other glandular disorders. Relaxation is one of the most general causes of the diseases of children. Every thing therefore which tends to unbrace their solids, ought to be carefully avoided.

We would not be understood by these observations as confining children to any particular kind of food. Their diet may be frequently varied, provided always that sufficient regard be had to simplicity.

OF THE EXERCISE OF CHILDREN.

Of all causes which conspire to render the life of man short and miserable, none has greater influence than the want of proper exercise: healthy parents, wholesome food, and proper clothing, will avail little, where exercise is neglected. Sufficient exercise will make up for several defects in nursing; but nothing can supply the want of it. It is absolutely necessary to the health, the growth, and the strength of children.

The desire of exercise is coeval with life itself. Were this principle attend to, many diseases might be prevented. But while indolence and sedentary employments prevent two-thirds of mankind from either taking sufficient exercise themselves, or giving it to their children, what have we to expect but diseases and deformity among their offspring? The rickets, so destructive to children, never appeared in Britain till manufactures began to flourish, and people, attracted by the love of gain, left the country to follow sendentary employments in great towns. It is amongst these people that this disease chiefly prevails, and not only deforms but kills many of their offspring.

The conduct of other young animals shews the propriety of giving exercise to children. Every other animal makes use of its organs of motion as soon as it can, and many of them, even when under no necessity of moving in quest of food, cannot be restrained without force. This is evidently the case with the calf, the lamb, and most other young animals. If these creatures were not permitted to frisk about and take exercise, they would soon die or become diseased. The same inclination appears very early in the human species; but as they are not able to take exercise themselves, it is the business of their parents and nurses to assist them.

Children may be exercised various ways. The best method while they are light, is to carry them about in the nurse's arms. This gives the nurse an opportunity of talking to the child, and of pointing out everything that may please and delight its fancy. Besides, it is much safer than swinging an infant in a machine, or leaving it to the care of such as are not fit to take care of themselves. Nothing can be more absurd than to set one child to keep another; this conduct has proved fatal to many infants, and has rendered others miserable for life.

The nurse ought to be careful to keep the child in a proper position, as deformity is often the consequence of inattention to this circumstance. Its situation ought also to be frequently changed. I have known a child's legs bent all on one side, by the nurse carrying it constantly on one arm.

When children begin to walk, the safest and best method of leading them about is by the hands. The common way, of swinging them in leading strings, fixed to their backs, has several bad consequences. It makes them throw their bodies forward, and press with their whole weight upon the stomach and breast; by this means the breathing is obstructed, the breasts flattened, and the bowels compressed; which must hurt the digestion, and occasion consumptions of the lungs and other diseases.

It is a common notion, that if children are set upon their feet too soon, their legs will become crooked. There is reason to believe, that the very reverse of this is true. Every member acquires strength in proportion as it is exercised. The limbs of children are weak indeed, but their bodies are proportionally light; and had they skill to direct themselves, they would soon be able to support their own weight. Who ever heard of any other animal that became crooked by using its legs too soon? Indeed, if a child is not permitted to make any use of its own legs till a considerable time after the birth, and be then set upon them with its whole weight at once, there may be some danger: but this proceeds entirely from the child's not having been accustomed to use its legs from the beginning.

Mothers of the poorer sort think they are great gainers by making their children lie or sit while they themselves work. In this they are greatly mistaken. By neglecting to give their children exercise, they are obliged to keep them a long time before they can do any thing for themselves, and to spend more on medicine than would have paid for proper care.

To take care of their children, is the most useful business in which even the poor can be employed: but, alas! it is not always in their power. Poverty often obliges them to neglect their offspring in order to procure the necessaries of life. When this is the case, it becomes the interest as well as the duty of the public to assist them. Ten thousand times more benefit would accrue to the state, by enabling the poor to bring up their own children, than from all the hospitals that ever can be erected for that purpose.

Whoever considers the structure of the human body will soon be convinced of the necessity of exercise for the health of children. The body is composed of an infinite number of tubes, whose fluids cannot be pushed on without the action and pressure of the muscles. But, if the fluids remain inactive, obstructions must happen, and the humours will of course be vitiated, which cannot fail to occasion diseases. Nature has furnished both the vessels which carry the blood and lymph with numerous valves, in order that the action of every muscle might push forward their contents; but without action, this admirable contrivance can have no effect. This part of the animal œconomy proves to a demonstration the necessity of exercise for the preservation of health.

Arguments to shew the importance of exercise might be drawn from every part of the animal œconomy: without exercise, the circulation of the blood cannot be properly carried on, nor the different secretions duly performed; without exercise, the fluids cannot be properly prepared, nor the solids rendered strong nor firm. The action of the heart, the motion of the lungs, and all the vital functions, are greatly assisted by exercise. But to point out the manner in which these effects are produced, would lead us further into the œconomy of the human body, than most of those for whom this treatise is intended would be able to follow. We shall therefore only add, that, when exercise is neglected, none of the animal functions can be duly performed; and when that is the case, the whole constitution must go to wreck.

A good constitution ought certainly to be our first object in the management of children. It lays a foundation for their being useful and happy in life: and whoever neglects it, not only fails in his duty to his offspring, but to society.

One very common error of parents, by which they hurt the constitutions of their children, is the sending them too young to school. This is often done solely to prevent trouble. When the child is at school, he needs no keeper. Thus the schoolmaster is made the nurse; and the poor child is fixed to a seat seven or eight hours a day, which time ought to be spent in exercise and diversions. Sitting so long cannot fail to produce the worst effects upon the body; nor is the mind less injured. Early application weakens the faculties, and often fixes in the mind an aversion to books, which continues for life.

But suppose this were the way to make children scholars, it certainly ought not to be done at the expence of their constitutions. Our ancestors, who seldom went to school very young, were not less learned than we. But we imagine the boy's education will be quite

marred, unless he be carried to school in his nurse's arms. No wonder if such hot-bed plants seldom become either scholars or men!

It is undoubtedly the duty of parents to instruct their children, at least till they are of an age proper to take some care of themselves. This would tend much to confirm the ties of parental tenderness and filial affection, of the want of which there are at present so many deplorable instances. Though few fathers have time to instruct their children, yet most mothers have; and surely they cannot be better employed.

Not only the confinement of children in public schools, but their number, often proves hurtful. Children are much injured by being kept in crowds within doors; their breathing not only renders the place unwholesome, but if any of them happen to be diseased, the rest catch the infection. A single child has been often known to communicate the bloody flux, the hooping cough, the itch, or other diseases, to almost every individual in a numerous school.

But, if fashion must prevail, and infants are to be sent to school, we would recommend it to teachers, as they value the interest of society, not to confine them too long at a time, but to allow them to run about and play at such active diversions as may promote their growth, and strengthen their constitutions. Were boys, instead of being whipped for stealing an hour to run, ride, swim, or the like, encouraged to employ a proper part of their time in these manly and useful exercises, it would have many excellent effects.

It would be of great service to boys, if, at a proper age, they were taught the military exercise. This would increase their strength, inspire them with courage, and, when their country called for their assistance, would enable them to act in her defence, without being obliged to undergo a tedious and troublesome course of instructions, at a time when they are less fit to learn new motions, gestures, &c.

An effeminate education will infallibly spoil the best natural constitution; and if boys are brought up in a more delicate manner than even girls ought to be, they will never be men.

Nor is the common education of girls less hurtful to the constitution than that of boys. Miss is set down to her frame before she can put on her clothes, and is taught to believe, that to excel at the needle is the only thing that can entitle her to general esteem. It is unnecessary here to insist upon the dangerous consequences of obliging girls to sit too much. They are pretty well known, and are too often felt at a certain time of life. But supposing this critical period to be got over, greater dangers still await them when they come to be mothers. Women who have been early accustomed to a sedentary life, generally run great hazard in childbed; while those who have been used to romp about, and take sufficient exercise, are seldom in any danger.

One hardly meets with a girl who can at the same time boast of early performances by the needle, and a good constitution. Close and early confinement generally occasions indigestions, head-aches, pale complexions, pain of the stomach, loss of appetite, coughs, con-

sumptions of the lungs, and deformity of body. The last of these indeed is not to be wondered at, considering the awkward postures in which girls sit at many kinds of needle-work, and the delicate flexible state of their bodies in the early periods of life.

Would mothers, instead of having their daughters instructed in many trifling accomplishments, employ them in plain work and housewifery, and allow them sufficient exercise in the open air, they would both make them more healthy mothers, and more useful members of society. I am no enemy to genteel accomplishments, but would have them only considered as secondary, and always disregarded when they impair health.

Many people imagine it a great advantage for children to be early taught to earn their bread. This opinion is certainly right, provided they were employed as not to hurt their health or growth; but, when these suffer, society, instead of being benefited, is a real loser by their labour. There are few employments, except sedentary ones, by which children can earn a livelihood; and if they be set to these too soon, it ruins their constitutions. Thus, by gaining a few years from childhood, we generally lose twice as many in the latter period of life, and even render the person less useful while he does live.

In order to be satisfied of the truth of this observation, we need only look into the great manufacturing towns, where we shall find a puny degenerate race of people, weak and sickly all their lives, seldom exceeding the middle period of life; or if they do, being unfit for business, they become a burden to society. Thus arts and manufactures, though they may increase the riches of a country, are by no means favourable to the health of its inhabitants. Good policy would therefore require, that such people as labour during life, should not be set too early to work. Every person conversant in the breed of horses, or other working animals, knows that if they be set to hard labour too soon, they never will turn out to advantage. This is equally true with respect to the human species.

There are nevertheless various ways of employing young people, without hurting their health. The easier parts of gardening, husbandry, or any business carried on without doors, are most proper. These are employments which most young people are fond of, and some parts of them may always be adapted to their age, taste, and strength.

Such parents, however, as are under the necessity of employing their children within doors, ought to allow them sufficient time for active diversions without. This would both encourage them to do more work, and prevent their constitutions from being hurt.

Some imagine that exercise within doors is sufficient; but they are greatly mistaken. One hour spent in running, or any other exercise without doors, is worth ten within. When children cannot go abroad, they may indeed be exercised at home. The best method of doing this, is to make them run about in a long room, or dance. This last kind of exercise, if not carried to excess, is of excellent service to young people. It cheers the spirits, promotes perspiration, strengthens the limbs, &c. I know an eminent physician who used to say,

that he made his children dance, instead of giving them physic. It were well if more people followed his example.

The COLD BATH may be considered as an aid to exercise. By it the body is braced and strengthened, the circulation and secretions promoted, and, were it conducted with prudence, many diseases, as the rickets, scrophula, &c. might thereby be prevented. The ancients, who took every method to render children hardy and robust, were no strangers to the use of the cold bath; and, if we may credit report, the practice of immersing children daily in cold water must have been very common among our ancestors.

The greatest objection to the use of the cold bath arises from the superstitions prejudices of nurses. These are often so strong, that it is impossible to bring them to make a proper use of it. I have known some of them who would not dry a child's skin after bathing it, lest it should destroy the effect of the water. Others will even put clothes dipt in the water upon the child, and either put it to bed, or suffer it to go about in that condition. Some believe, that the whole virtue of the water depends upon its being dedicated to a particular saint; while others place their confidence in a certain number of dips, as three, seven, nine, or the like; and the world could not persuade them, if these do not succeed, to try it a little longer. Thus, by the whims of nurses, children lose the benefit of the cold bath, and the hopes of the physician from that medicine are often frustrated.

We ought not, however, entirely to set aside the cold bath, because some nurses make a wrong use of it. Every child, when in health, should at least have its extremities daily washed in cold water. This is a partial use of the cold bath, and is better than none. In winter this may suffice; but, in the warm season, if a child be relaxed, or seem to have a tendency to the rickets or scrophula, its whole body ought to be frequently immersed in cold water. Care however must be taken not to do this when the body is hot, or the stomach full. The child should be dipped only once at a time, should be taken out immediately, and have its skin well rubbed with a dry cloth.

THE BAD EFFECTS OF UNWHOLESOME AIR UPON CHILDREN.

Few things prove more destructive to children than confined or unwholesome air. This is one reason why so few of those infants who are put into hospitals, or parish workhouses, live. These places are generally crowded with old, sickly, and infirm people; by which means the air is rendered so extremely pernicious, that it becomes a poison to infants.

Want of wholesome air is likewise destructive to many of the children born in great towns. There the poorer sort of inhabitants live in low, dirty, confined houses, to which the fresh air has hardly any access. Though grown people, who are hardy and robust, may live in such situations, yet they generally prove fatal to their offspring, few of whom arrive at maturity, and those who do are weak and deformed. As such people are not in a condition to carry their children abroad into the open air, we must lay our account with losing the greater

part of them. But the rich have not this excuse. It is their business to see their children daily carried abroad, and that they be kept in the open air for a sufficient time. This will always succeed better if the mother goes along with them. Servants are often negligent and allow a child to sit or lie on the damp ground, instead of leading or carrying it about. The mother surely needs air as well as her children; and how can she be better employed than in attending them?

A very bad custom prevails, of making children sleep in small apartments, or crowding two or three beds into one chamber. Instead of this, the nursery ought to be the largest and best aired room in the house. When children are confined in small apartments, the air not only becomes unwholesome, but the heat relaxes their solids, renders them delicate, and disposes them to colds and other disorders. Nor is the custom of wrapping them up too close in cradles less pernicious. One would think that nurses were afraid less children should suffer by breathing free air, as many of them actually cover the child's face while asleep, and others wrap a covering over the whole cradle, by which means the child is forced to breathe the same air over and over all the time it sleeps. Cradles indeed are on many accounts hurtful to children, and it would be better if they were totally laid aside.

A child is generally laid to sleep with all its cloths on; and if a number of others are heaped above them, it must be overheated; by which means it cannot fail to catch cold on being taken out of the cradle, and exposed to the open air with only its usual clothing, which is too frequently the case.

Children who are kept within doors all day, and sleep all night in warm close apartments, may, with great propriety, be compared to plants nursed in a hot-house, instead of the open air. Though such plants may by this means be kept alive for some time, they will never arrive at that degree of strength, vigour, and magnitude, which they would have acquired in the open air, nor would they be able to bear it afterwards, should they be exposed to it.

Children brought up in the country, who have been accustomed to open air, should not be too early sent to great towns, where it is confined and unwholesome. This is frequently done with a view to forward their education, but proves very hurtful to their health. All schools and seminaries of learning ought, if possible, to be so situated as to have fresh, dry, wholesome air, and should never be too much crowded.

Without entering into a detail of the particular advantages of wholesome air to children, or of the bad consequences which proceed from the want of it, I shall only observe, that of several thousands of children which have been under my care, I do not remember one instance of a single child who continued healthy in a close confined situation; but have often known the most obstinate diseases cured by removing them from such a situation to an open free air. Infants apparently expiring in convulsion-fits have been recovered by being removed into the fresh air, and by being divested of the many folds of flannel in which they were rolled and muffled.

OF NURSES.

It is not here intended to lay down rules for the choice of nurses. This would be wasting time. Common sense will direct every one to chuse a woman who is healthy, and has plenty of milk. If she be at the same time cleanly, careful, and good natured, she can hardly fail to make a proper nurse. After all, however, the only certain proof of a good nurse, is a healthy child upon her breast. But, as the misconduct of nurses often proves fatal to children, it will be of importance to point out a few of their most baneful errors, in order to make parents look more strictly into the conduct of those to whom they commit the care of their infant offspring.

Though it admits of some exceptions, yet we may lay it down as a general rule, *that every woman who nurses for hire should be carefully looked after, or she will not do her duty.* For this reason parents ought always to have their children nursed under their own eye, if possible; and where this cannot be done, they should be extremely circumspect in the choice of those persons to whom they intrust them. It is folly to imagine that any woman who abandons her own child to suckle another for the sake of gain, should feel the affection of a parent towards her nursling; yet so necessary are the affections in a nurse, that but for them, the human race would soon be extinct.

One of the most common faults of those who nurse for hire, is dozing children with stupefactives, or such things as lull them asleep. An indolent nurse, who does not give a child sufficient exercise in the open air to make it sleep, and does not chuse to be disturbed by it in the night, will seldom fail to procure for it a dose of laudanum, diacodum, saffron, or, what answers the same purpose, a dose of spirits, or other strong liquors. These, though they be certain poison to infants, are every day administered by many who bear the character of very good nurses; but if a mother on visiting her child at nurse finds it always asleep, I would advise her to remove it immediately, otherwise it will soon sleep its last.

A nurse who has not milk enough is apt to imagine that this defect may be supplied by giving the child wines, cordial waters, or other strong liquors. This is an egregious mistake. The only thing that has any chance to supply the place of the nurse's milk, must be somewhat nearly the same quality as cow's milk, ass's milk, or beaf tea, with a little bread. It never can be done by the help of strong liquors. These, instead of nourishing an infant, never fail to produce the contrary effect.

Children are often hurt by nurses suffering them to cry long and vehemently. This strains their tender bodies, and frequently occasions ruptures, inflammations of the throat, lungs, &c. A child never continues to cry long without some cause, which might always be discovered by proper attention; and the nurse who can hear an infant cry till it has almost spent itself, without endeavouring to please it, must be cruel indeed, and is unworthy to be entrusted with the care of a human creature.

Nurses who deal much in medicine are always to be suspected. They trust to it, and neglect their duty. I never knew a good nurse

who had her Godfrey's cordial, Daffy's elixirs, Dalby's carminative, &c. at hand. Such generally imagine, that a dose of medicine will make up for all defects in food, air, exercise, and cleanliness. By errors of this kind, I will venture to say that one half the children who die annually in London lose their lives.

Allowing children to continue long wet, is another very pernicious custom of indolent nurses. This is not only disagreeable, but it galls and frets the infant, and, by relaxing the solids, occasions scrophulas, rickets, and other diseases. A dirty nurse is always to be suspected.

Nature often attempts to free the bodies of children from bad humours, by throwing them upon the skin; by this means fevers and other diseases are prevented. Nurses are apt to mistake such critical eruptions for an itch, or some other infectious disorder. Accordingly they take every method to drive them in. In this way many children lose their lives; and no wonder, as Nature is opposed in the very method she takes to relieve them. It ought to be a rule, which every nurse should observe, never to stop any eruption without proper advice, or being well assured that it is not of a critical nature. At any rate, it is never to be done without previous evacuations.

Loose stools is another method by which Nature often prevents or carries off the diseases of infants. If these proceed too far, no doubt they ought to be checked; but this is never to be done without the greatest caution. Nurses, upon the first appearance of loose stools, frequently fly to the use of astringents, or such things as bind the body. Hence inflammatory fevers, and other fatal diseases, are occasioned. A dose of rhubarb, a gentle vomit, or some other evacuation, should always precede the use of astringent medicines.

One of the greatest faults of nurses is, concealing the diseases of children from their parents. This they are extremely ready to do, especially when the disease is the effect of their own negligence. Many instances might be given of persons who have been rendered lame for life by a fall from their nurse's arms, which she, through fear, concealed till the misfortune was past cure. Every parent who intrusts a nurse with the care of a child, ought to give her the strictest charge not to conceal the most trifling disorder or misfortune that may befal it.

We can see no reason why a nurse who conceals any misfortune which happens to a child under her care till it loses its life or limbs, should not be punished. A few examples of this would save the lives of many infants; but as there is little reason to expect that it will ever be the case, we would earnestly recommend it to all parents to look carefully after their children, and not to trust so valuable a treasure entirely in the hands of a hireling.

No person ought to imagine these things unworthy of his attention. On the proper management of children depend not only their health and usefulness in life, but likewise the safety and prosperity of the state to which they belong. Effeminacy ever will prove the ruin of any state where it prevails; and, when its foundations are laid in infancy, it can never afterwards be wholly eradicated. Parents who love their offspring, and wish well to their country, ought therefore,

in the management of their children, to avoid every thing that may have a tendency to make them weak or effeminate, and to take every method in their power to render their constitutions strong and hardy.

——By arts like these,
Laconia nurs'd of old her hardy sons;
And Rome's unconquer'd legions urg'd their way,
Unhurt, thro' every toil in every clime. ARMSTRONG.

CHAP. II.

Of the Laborious, the Sedentary, and the Studious.

THAT men are exposed to particular diseases from the occupations which they follow, is a fact well known; but to remedy this evil is a matter of some difficulty. Most people are under the necessity of following those employments to which they have been bred, whether they be favourable to health or not. For this reason, instead of inveighing in a general way, as some authors have done, against those occupations which are hurtful to health, we shall endeavour to point out the circumstances in each of them from which the danger chiefly arises, and to propose the most rational methods of preventing it.

Chemists, founders, forgers, glass-makers, and several other artists, are hurt by the unwholesome air which they are obliged to breathe. This air is not only loaded with the noxious exhalations arising from metals and minerals, but is so charged with phlogiston as to be rendered unfit for expanding the lungs sufficiently, and answering the other important purposes of respiration. Hence proceed asthmas, coughs, and consumptions of the lungs, so incident to persons who follow these employments.

To prevent such consequences, as far as possible, the places where these occupations are carried on ought to be constructed in such a manner as to discharge the smoke and other exhalations, and admit a free current of fresh air. Such artists ought never to continue long at work; and when they give over, they should suffer themselves to cool gradually, and put on their clothes before they go into the open air. They ought never to drink large quantities of cold, weak, or watery liquors, while their bodies are hot, nor to indulge in raw fruits, salads, or any thing that is cold on the stomach. Yet when persons heated with labour have drunk cold liquor, they ought to continue at work for some time after.

Miners, and all who work under ground, are likewise hurt by unwholesome air. The air by its stagnation in deep mines, not only loses its proper spring, and other qualities necessary for respiration, but is often loaded with such noxious exhalations as to become a most deadly poison.

The two kinds of air which prove most destructive to mines, are what they call the *fire-damp* and the *choke-damp*. In both cases, the air becomes a poison by its being loaded with phlogiston. The danger from the former may be obviated by making it explode before it

accumulates in too great quantities, and the latter may be generally carried off by promoting a free circulation of air in the mine.

Miners are not only hurt by unwholesome air, but likewise by the particles of metal which adhere to their skin, clothes, &c. These are absorbed, or taken up into the body, and occasion palsies, vertigoes, and other nervous affections, which often prove fatal. Fallopius observes, that those who work in mines of mercury seldom live above three or four years. Lead, and several other metals, are likewise very pernicious to the health.

Miners ought never to go to work fasting, nor continue too long at work. Their food ought to be nourishing, and their liquor generous; nothing more certainly hurts them than living too low. They should by all means avoid costiveness. This may either be done by chewing a little rhubarb, or taking a sufficient quantity of salad oil. Oil not only opens the body, but sheathes and defends the intestines from the ill effects of the metals. All who work in mines or metals ought to wash carefully, and to change their clothes as soon as they give over working. Nothing would tend more to preserve the health of such people than a strict and almost religious regard to cleanliness.

Plumbers, painters, gilders, smelters, makers of white lead, and many others who work in metals, are liable to the same diseases as miners; and ought to observe the same directions for avoiding them.

Tallow-chandlers, boilers of oil, and all who work in putrid animal substances, are likewise liable to suffer from the unwholesome smells or effluvia of these bodies. They ought to pay the same regard to cleanliness as miners; and when they are affected with nausea, sickness, or indigestion, we would advice them to take a vomit or a gentle purge. Such substances ought always to be manufactured as soon as possible. When long kept, they not only become unwholesome to those who manufacture them, but likewise to people who live in the neighbourhood.

It would greatly exceed the limits of this part of our subject, to specify the diseases peculiar to persons of every occupation; we shall therefore consider mankind under the general classes of *Laborious*, *Sedentary*, and *Studious*.

THE LABORIOUS.

Though those who follow laborious employments are in general the most healthy of mankind, yet the nature of their occupations, and the places where they are carried on, expose them more particularly to some diseases. Husbandmen, for example, are exposed to all the vicissitudes of the weather, which, in this country, are often very great and sudden, and occasion colds, coughs, quinsies, rheumatisms, fevers, and other acute disorders. They are also forced to work hard, and carry burdens above their strength, which, by straining the vessels, occasion asthmas, ruptures, pleurisies, &c.

Those who labour without doors are often afflicted with intermitting fevers or agues, occasioned by the frequent vicissitudes of heat and cold, poor living, bad water, sitting or lying on the damp

ground, evening dews, night air, &c. to which they are frequently exposed.

Such as bear heavy burdens, as porters, labourers, &c. are obliged to draw in the air with much greater force, and also to keep their lungs distended with more violence than necessary for common respiration: by this means the tender vessels of the lungs are overstretched, and often burst, insomuch that a spitting of blood, or fever, ensues. Hippocrates mentions an instance to this purpose, of a man who, upon a wager, carried an ass; but was soon after seized with a fever, a vomiting of blood, and a rupture.

Carrying heavy burdens is generally the effect of mere laziness, which prompts people to do at once what should be done at twice. Sometimes it proceeds from vanity or emulation. Hence it is, that the strongest men are most commonly hurt by heavy burdens, hard labour, or feats of activity. It is rare to find one who boasts of his strength without a rupture, a spitting of blood, or some other disease, which he reaps as the fruit of his folly. One would imagine the daily instances we have of the fatal effects of carrying great weights, running, wrestling, and the like, would be sufficient to prevent such practices.

There are indeed some employments which necessarily require a great exertion of strength; as porters, blacksmiths, carpenters, &c. None ought to follow these but men of strong body; and they should never exert their strength to the utmost, nor work too long. When the muscles are violently strained, frequent rest is necessary, in order that they may recover their tone; without this, the strength and constitution will soon be worn out, and a premature old age be induced.

The erysipelas, or St. Anthony's fire, is a disease very incident to the laborious. It is occasioned by whatever gives a sudden check to the perspiration, as drinking cold water when the body is warm, wet feet, keeping on wet clothes, sitting or lying on the damp ground, &c. It is impossible for those who labour without doors always to guard against these inconveniences; but it is known from experience, that their ill consequences might often be prevented by proper care.

The iliac passion, the colic, and other complaints of the bowels, are often occasioned by the same causes as the erysipelas; but they may likewise proceed from flatulent and indigestible food. Labourers generally eat unfermented bread, made of pease, beans, rye, and other windy ingredients. They also devour great quantities of unripe fruits, baked, stewed, or raw, with various kinds of roots and herbs, upon which they often drink sour milk, stale small bear, or the like. Such a mixture cannot fail to fill the bowels with wind, and occasion diseases of those parts.

Inflammations, whitloes, and other diseases of the extremeties, are likewise common among those who labour without doors. These diseases are often attributed to venom, or some kind of poison; but they generally proceed either from sudden heat after cold, or the contrary. When labourers, milk-maids, &c. come from the field cold or wet, they run to the fire, and often plunge their hands in

warm water, by which means the blood and other humours in those parts are suddenly expanded, and, the vessels not yielding so quickly. a strangulation happens, and an inflammation or a mortification ensues.

When such persons come home cold, they ought to keep at a distance from the fire for some time, to wash their hands in cold water, and to rub them well with a dry cloth. It sometimes happens, that people are so benumbed with cold, as to be quite deprived of the use of their limbs. In this case the only remedy is to rub the parts affected with snow, or, where it cannot be had, with cold water. If they be held near the fire, or plunged into warm water, a mortification will generally ensue.

Labourers in the hot season are apt to lie down and sleep in the sun. This practice is so dangerous, that they often awake in a burning fever. Those ardent fevers, which prove so fatal about the end of summer and beginning of autumn, are frequently occasioned by this means. When labourers leave off work, which they ought always to do during the heat of the day, they should go home, or at least get under some cover where they may repose themselves in safety.

Many people follow their employments in the fields from morning till night, without eating any thing. This cannot fail to hurt their health. However homely their fare be, they ought to have it at regular times; and the harder they work, the more frequently they should eat. If the humours be not frequently replenished with fresh nourishment, they soon become putrid, and produce fevers of the very worst kind.

Many labourers are extremely careless with respect to what they eat or drink, and often, through mere indolence, use unwholesome food, when they might, for the same expence, have that which is wholesome. In some parts of Britain, the peasants are too careless even to take the trouble of dressing their own victuals. Such people would live upon one meal a day in indolence, rather than labour, though it were to procure them the greatest affluence.

Fevers of a very bad kind are often occasioned among labourers by *poor living*. When the body is not sufficiently nourished, the humours become vitiated, and the solids weak; from whence the most fatal consequences ensue. *Poor living* is likewise productive of many of those cutaneous diseases so frequent among lower classes of people. It is remarkable that cattle, when pinched in their food, are generally affected with diseases of the skin, which seldom fail to disappear when they are put upon a good pasture. This shews how much a good state of the humours depends upon a sufficient quantity of proper nourishment.

Poverty not only occasions, but aggravates, many of the diseases of the laborious. Few of them have much foresight; and, if they had, it is seldom in their power to save any thing. They are glad to make a shift to live from day to day; and when any disease overtakes them, they are miserable indeed. Here the godlike virtue of charity ought always to exert itself. To relieve the industrious poor in distress, is surely the most exalted act of religion and humanity. They

alone, who are witnesses of those scenes of calamity, can form a notion of what numbers perish in diseases for want of proper assistance, and even for want of the necessaries of life.

Labourers are often hurt by a foolish emulation, which prompts them to vie with one another, till they overheat themselves to such a degree as to occasion a fever, or even to drop down dead. Such as wantonly throw away their lives in this manner, deserve to be looked upon in no better light than self-murderers.

The office of a *soldier*, in time of war, may be ranked among the laborious employments. Soldiers suffer many hardships from the inclemency of seasons, long marches, bad provisions, hunger, watching, unwholesome climates, bad water, &c. These occasion fevers, fluxes, rheumatisms, and other fatal diseases, which generally do greater execution than the sword, especially when campaigns are continued too late in the year.

Those who have the command of armies should take care that their soldiers be well clothed and well fed. They ought also to finish their campaigns in due season, and to provide their men with dry and well-aired winter quarters. These rules, taking care, at the same time, to keep the sick at a proper distance from those in health, would tend greatly to preserve the lives of the soldiery.

It is indeed to be regretted, that soldiers suffer not less from indolence and intemperance in time of peace, than from hardships in time of war. If men are idle, they will be vicious. It would therefore be of great importance, could a scheme be formed for rendering the military, in times of peace, both more healthy and more useful. These desirable objects might, in our opinion, be obtained, by employing them for some hours every day, and advancing their pay accordingly. By this means, idleness, the mother of vice, might be prevented, the price of labour lowered; public works, as harbours, canals, turnpike roads, &c. might be made without hurting manufacturers; and soldiers might be enabled to marry and bring up children. A scheme of this kind might easily be conducted, so as not to depress the martial spirit, provided the men were only to work four or five hours every day, and always to work without doors: no soldiers should be suffered to work too long, nor to follow any sedentary employment. Sedentary employments render men weak and effeminate, quite unfit for the hardships of war: whereas working for a few hours every day without doors would inure them to the weather, brace their nerves, and increase their strength and courage.

Sailors may also be numbered among the laborious. They undergo great hardships from change of climate, the violence of the weather, hard labour, bad provisions, &c. Sailors are of so great importance both to the trade and safety of this kingdom, that too much pains can never be bestowed in pointing out the means of preserving their lives.

One great source of the diseases of sea-faring people is excess. When they get on shore, after having been long at sea, without regard to the climate, or their own constitutions, they plunge headlong into all manner of riot, and often persist till a fever puts an end

to their lives. Thus intemperance, and not the climate, is often the cause why so many of our brave sailors die on foreign coasts. Such people ought not to live too low; but they will find moderation the best defence against fevers and many other maladies.

Sailors, when on duty, cannot avoid sometimes getting wet. When this happens, they should change their clothes as soon as they are relieved, and take every method to restore the perspiration. They should not, in this case, make too free with spirits or other strong liquors, but should rather drink them diluted with warm water, and goimmediately to bed, where a sound sleep and a gentle sweat would set all to rights.

But the health of sailors suffer most from unwholesome food. The constant use of salted provisions vitiates the humours, and occasions the scurvy, and other obstinate maladies. It is no easy matter to prevent this disease in long voyages; yet we cannot help thinking, that much might be done towards affecting so desirable an ends were due pains bestowed for that purpose. For example, various roots, greens, and fruits, might be kept a long time at sea, as onions, potatoes, cabbages, lemons, oranges, tamarinds, apples, &c. When fruits cannot be kept, the juices of them, either fresh or fermented, may. With these all the drink, and even the food of the ship's company, ought to be acidulated in long voyages.

Stale bread and beer likewise contribute to vitiate the humours. Flour will keep for a long time on board, of which fresh bread might frequently be made. Malt too might be kept, and infused with boiling water at any time. This liquor, when drank even in form of wort, is very wholesome, and is found to be an antidote against the scurvy Small wines and cyder might likewise be plentifully laid in; and should they turn sour, they would still be useful as vinegar. Vinegar is a great antidote against diseases, and should be used by all travellers, especially at sea. It may either be mixed with the water they drink, or taken in their food.

Such animals as can be kept alive ought likewise to be carried on board, as hens, ducks, pigs, &c. Fresh broths made of portable soup, and puddings made of pease or other vegetables, ought to be used plentifully. Many other things will readily occur to people conversant in these matters, which would tend to preserve the health of that brave and useful set of men.

The principal means employed with remarkable success by our celebrated circumnavigator, Captain Cooke, were strict attention to cleanliness, procuring abundance of vegetable aliment and fresh provisions, especially good water. In dry weather his people aired their hammocks, and were allowed at all times a sufficient time for rest.

We have reason to believe, if due attention were paid to the diet, air, clothing, and above all things to the cleanliness of sea-faring people, they would be the most healthy set of men in the world; but when these are neglected, the very reverse will happen.

The best *medical antidote* that we can recommend to sailors or soldiers on foreign coasts, especially where dampness prevails, is the Peruvian bark. This will often prevent fevers, and other fatal dis-

cases. About a drachm of it may be chewed every day; or if this should prove disagreeable, an ounce of bark, with half an ounce of orange peel, and two drachms of snake root coarsely powdered, may be infused for two or three days in an English quart of brandy, and half a wine glass of it taken twice or thrice a day, when the stomach is empty. This has been found to be an excellent antidote against fluxes, putrid, intermitting, and other fevers, in unhealthy climates. It is not material in what form this medicine is taken. It may either be infused in water, wine, or spirits, as recommended above, or made into an electuary with syrup of lemons, oranges, or the like.

THE SEDENTARY.

Though nothing can be more contrary to the nature of man than a sedentary life, yet this class comprehends by far the greater part of the species. Almost the whole female world, and in manufacturing countries the major part of the males, may be reckoned sedentary.

The appellation of sedentary has generally been given only to the studious; we can see no reason, however, for restricting it to them alone. Many artificers may, with as much propriety, be denominated sedentary as the studious, with this particular disadvantage, that they are often obliged to sit in very awkward postures, which the studious need not do, unless they please.

Agriculture, the first and most healthful of all employments, is now followed by few who are able to carry on any other business. But those who imagine that the culture of the earth is not sufficient to employ all its inhabitants, are greatly mistaken. An ancient Roman, we are told, could maintain his family from the produce of one acre of ground. So might a modern Britain, if he would be contented to live like a Roman. This shews what an immense increase of inhabitants Britain might admit of, and all of them live by the culture of the ground.

Agriculture is the great source of domestic riches. Where it is neglected, whatever wealth may be imported from abroad, poverty and misery will abound at home. Such is, and ever will be, the fluctuating state of trade and manufactures, that thousands of people may be in full employment to day and in beggary to-morrow. This can never happen to those who cultivate the ground. They can eat the fruit of their labour, and can always by industry obtain, at least, the necessaries of life.

Though sedentary employments are necessary, yet there seems to be no reason why any person should be confined for life to these alone. Were such employments intermixed with the more active and laborious, they would never do hurt. It is constant confinement that ruins the health. A man may not be hurt by sitting five or six hours a-day; but if he is obliged to sit ten or twelve, he will soon become a prey to disease.

But it is not want of exercise alone which hurts sedentary people: they likewise suffer from the confined air which they breathe. It is very common to see ten or a dozen tailors, for example, crowded into one small apartment, where there is hardly room for one per-

son to breathe freely. In this situation they generally continue for many hours at a time, often with the addition of several candles, which tend likewise to waste the air, and render it less fit for respiration. Air that is breathed repeatedly becomes unfit for expanding the lungs. This is one cause of the phthisical coughs, and other complaints of the breast, so incident to sedentary artificers.

Even the perspiration from a great number of persons pent up together, renders the air unwholesome. The danger from this quarter will be greatly increased, if any one of them happens to have bad lungs, or to be otherwise diseased. Those who sit near him being forced to breathe the same air, can hardly fail to be infected. It would be a rare thing, however, to find a dozen sedentary people all in good health. The danger of crowding them together must therefore be evident to every one.

Many of those who follow sedentary employments are constantly in a bending posture, as shoemakers, tailors, cutlers, &c. Such a situation is extremely hurtful. A bending posture obstructs all the vital motions, and of course must destroy the health. Accordingly we find such artificers generally complaining of indigestions, flatulencies, head-aches, pains of the breast, &c.

The aliment in sedentary people, instead of being pushed forwards by an erect posture, and the action of the muscles, is in a manner confined in the bowels. Hence indigestions, costiveness, wind, and other hypochondriacal affections, the constant companions of the sedentary. Indeed none of the excretions can be duly performed where exercise is wanting; and when the matter which ought to be discharged in this way is retained too long in the body, it must have bad effects, as it is again taken up into the mass of humours.

A bending posture is likewise hurtful to the lungs. When this organ is compressed, the air cannot have free excess into all its parts, so as to expand them properly. Hence tubercles, adhesions, &c. are formed, which often end in consumptions. Besides, the proper action of the lungs being absolutely necessary for making good blood, when that organ fails, the humours soon become universally depraved, and the whole constitution goes to wreck.

Sedentary artificers are not only hurt by pressure on the bowels, but also on the inferior extremities, which obstructs the circulation in these parts, and renders them weak and feeble. Thus tailors, shoemakers, &c. frequently lose the use of their legs altogether: besides, the blood and humours are, by stagnation, vitiated, and the perspiration is obstructed; from whence proceed the scab, ulcerous sores, foul blotches, and other cutaneous diseases so common among this class of the community.

A bad figure of body is a very common consequence of close application to sedentary employments. The spine, for example, by being continually bent, puts on a crooked shape, and generally remains so ever after. But a bad figure of body has already been observed to be hurtful to health, as the vital functions are thereby impeded.

A sedentary life seldom fails to occasion an universal relaxation of the solids. This is the great source from whence most of the diseases

of a sedentary people flow. The scrophula, consumption, hysterics, and nervous diseases, now so common, were very little known in this country before sedentary artificers became so numerous; and they are very little known still among such of our people as follow active employments without doors, though in great towns at least two thirds of the inhabitants are afflicted with them.

It is very difficult to remedy those evils, because many who have been accustomed to a sedentary life, like ricketty children, lose all inclination for exercise; we shall, however, throw out a few hints with respect to the most likely means for preserving the health of this useful set of people, which some of them, we hope, will be wise enough to pay attention to.

It has been already observed, that sedentary artificers are often hurt by their bending posture. They ought therefore to stand or sit as erect as the nature of their employments will permit. They should likewise change their posture frequently, and should never sit too long at a time, but leave off work, and walk, ride, run, or do any thing that will promote the vital motions.

Sedentary artificers are generally allowed too little time for exercise; yet short as it is, they seldom employ it properly. A journeyman tailor or weaver, for example, instead of walking abroad for exercise and fresh air, at his hours of leasure, chuses often to spend them in a public house, or in playing at some sedentary game, by which he generally loses both his time and his money.

The awkward postures in which many sedentary artificers work, seem rather to be the effect of custom than necessity. For example, a table might surely be contrived for ten or a dozen tailors to sit round with liberty for their legs either to hang down, or rest upon a foot board, as they should chuse. A place might likewise be cut out for each person, in such a manner that he might sit as conveniently for working as in the present mode of sitting cross-legged.

All sedentary artificers ought to pay the most religious regard to cleanliness. Both their situation and occupations render this highly necessary. Nothing would contribute more to preserve their health, than a strict attention to it: and such of them as neglect it, not only run the hazard of losing health, but of becoming a nuisance to their neighbourhood and friends.

Sedentary people ought to avoid food that is windy or hard of digestion, and should pay the strictest regard to sobriety. A person who works hard without doors will soon throw off a debauch; but one who sits has by no means an equal chance. Hence it often happens, that sedentary people are seized with fevers after hard drinking. When such persons feel their spirits low, instead of running to the tavern for relief, they should ride or walk in the fields. This would remove the complaint more effectually than strong liquor, and would never hurt the constitution.

Instead of multiplying rules for preserving the health of the sedentrary, we shall recommend to them the following general plan, viz. That every person who follows a sedentary employment should cultivate a piece of ground with his own hands. This he might dig, plant,

sow, and weed at leisure hours, so as to make it both an exercise and amusement, while it produced many of the necessaries of life. After working an hour in a garden, a man will return with more keenness to his employment within doors, than if he had been all the while idle

Labouring the ground is every way conducive to health. It not only gives exercise to every part of the body, but the very smell of the earth and fresh herbs revives and cheers the spirits, whilst the perpetual prospect of something coming to maturity, delights and entertains the mind. We are so formed as to be always pleased with somewhat in prospect, however distant or however trivial. Hence the happiness that most men feel in planting, sowing, building, &c. These seem to have been the chief employments of the more early ages: and, when kings and conquerors cultivated the ground, there is reason to believe that they knew as well wherein true happiness consisted as we do.

It may seem romantic to recommend gardening to manufacturers in great towns; but observation proves that the plan is very practicable. In the town of Sheffield, in Yorkshire, where the great iron manufacture is carried on, there is hardly a journeyman cutler who does not possess a piece of ground which he cultivates as a garden. This practice has many salutary effects. It not only induces these people to take exercise without doors, but also to eat many greens, roots, &c. of their own growth, which they would never think of purchasing. There can be no reason why manufacturers in any other town in Great Britain should not follow the same plan.

Mechanics are too much inclined to crowd into great towns. The situation may have some advantages, but it has likewise many disadvantages. All mechanics who live in the country have it in their power to cultivate a piece of ground; which indeed most of them do. This not only gives them exercise, but enables them to live more comfortably. So far at least as my observation extends, mechanics who live in the country are far more happy than those in great towns. They enjoy better health, live in greater affluence, and seldom fail to rear a healthy and numerous offspring.

In a word, exercise without doors, in one shape or another, is absolutely necessary to health. Those who neglect it, though they may for a while drag out life, can hardly be said to enjoy it. Their humours are generally vitiated, their solids relaxed, and their spirits languid and depressed.

THE STUDIOUS.

Intense thinking is so destructive to health, that few instances can be produced of studious persons who are strong and healthy. Hard study always implies a sedentary life; and when intense thinking is joined to the want of exercise, the consequences must be bad. We have frequently known even a few months of close application to study ruin an excellent constitution, by inducing a train of nervous complaints which never could be removed. Man is evidently not formed for continual thought more than for perpetual action, and would be as soon worn out by the one as by the other.

So great is the power of the mind over the body, that, by its influence, the whole vital motions may be accelerated or retarded to almost any degree. Thus cheerfulness and mirth quicken the circulation, and promote all the secretions; whereas sadness and profound thought never fail to retard them. Hence it would appear, that even a degree of thoughtlessness is necessary to health. Indeed the perpetual thinker, seldom enjoys either health or spirits; while the person who can hardly be said to think at all, generally enjoys both.

Perpetual thinkers, as they are called, seldom think long. In a few years they generally become quite stupid, and exhibit a melancholy proof how readily the greatest blessings may be abused. Thinking, like every thing else when carried to extreme, becomes a vice; nor can any thing afford a greater proof of wisdom, than for a man frequently and seasonably to unbend his mind. This may generally be done by mixing in cheerful company, active diversions or the like.

Instead of attempting to investigate the nature of that connexion which subsists between the mind and body, or to inquire into the manner in which they mutually affect each other, we shall only mention those diseases to which the learned are more peculiarly liable, and endeavour to point out the means of avoiding them.

Studious persons are very subject to the gout. This painful disease in a great measure proceeds from indigestion, and an obstructed perspiration. It is impossible that the man who sits from morning till night should either digest his food, or have any of the secretions in due quantity. But when that matter which should be thrown off by the skin is retained in the body, and the humours are not duly prepared, diseases must ensue.

The studious are likewise very liable to the stone and gravel. Exercise greatly promotes both the secretion and discharge of urine; consequently a sedentary life must have the contrary effect. Any one may be satisfied of this by observing, that he passes much more urine by day than in the night, and also when he walks or rides, than when he sits.

The circulation in the liver being slow, obstructions in that organ can hardly fail to be the consequence of inactivity. Hence sedentary people are frequently afflicted with schirrous livers. But the proper secretion and discharge of the bile is so necessary a part of the animal œconomy, that where these are not duly performed, the health must soon be impaired. Jaundice, indigestion, loss of appetite, and a wasting of the whole body, seldom fail to be the consequences of a vitiated state of the liver, or obstructions of the bile.

Few diseases prove more fatal to the studious than consumptions of the lungs. It has already been observed that this organ cannot be duly expanded in those who do not take proper exercise; and where that is the case, obstructions and adhesions will ensue. Not only want of exercise, but the posture in which studious persons generally sit, is very hurtful to the lungs. Those who read or write much are ready to contract a habit of bending forwards, and often press with their breast upon a table or bench. This posture cannot fail to hurt the lungs.

No person can enjoy health who does not properly digest his food. But intense thinking and inactivity never fail to weaken the powers of digestion. Hence the humours become crude and vitiated, the solids weak and relaxed, and the whole constitution goes to ruin.

Long and intense thinking often occasions grievous head-aches, which bring on vertigos, apoplexies, palsies, and other fatal disorders. The best way to prevent these is, never to study too long at one time, and to keep the body regular, either by proper food, or taking frequently a little of some opening medicine.

Those who read or write much are often afflicted with sore eyes. Studying by candle-light is peculiarly hurtful to the sight. This ought to be practised as seldom as possible. When it is unavoidable, the eyes should be shaded, and the head should not be held too low. When the eyes are weak or painful, they should be bathed every night and morning in cold water, to which a little brandy may be added.

It has already been observed, that the excretions are very defective in the studious. The dropsy is often occasioned by the retention of those humours which ought to be carried off in this way. Any person may observe, that sitting makes his legs swell, and that this goes off by exercise; which clearly points out the method of prevention.

Fevers, especially of the nervous kind, are often the effect of study. Nothing affects the nerves so much as intense thought. It in a manner unhinges the whole human frame, and not only hurts the vital motions, but disorders the mind itself. Hence a delirium, melancholy, and even madness, are often the effects of close application to study. In fine, there is no disease which can proceed either from a bad state of the humours, a defect of the usual secretions, or a debility of the nervous system, which may not be induced by intense thinking.

The most afflicting of all the diseases which attack the studious is the hypochondriac. This disease seldom fails to be the companion of deep thought. It may rather be called a complication of maladies than a single one. To what a wretched condition are the best of men often reduced by it? Their strength and appetite fail; a perpetual gloom hangs over their minds; they live in the constant dread of death, and are continually in search of relief from medicine, where, alas! it is not to be found. Those who labour under this disorder, though they are often made the subject of ridicule, justly claim our highest sympathy and compassion.

Hardly any thing can be more preposterous than for a person to make study his sole business. A mere student is seldom a useful member of society. He often neglects the most important duties of life, in order to pursue studies of a very trifling nature. Indeed, it rarely happens that any useful invention is the effect of mere study. The farther men dive into profound researches, they generally deviate the more from common sense, and too often lose sight of it altogether. Profound speculations, instead of making men wiser or better, generally render them absolute sceptics, and overwhelm them with doubt and uncertainty. All that is necessary for man to know, in order to be happy, is easily obtained; and the rest, like the forbidden fruit, serves only to increase his misery.

Studious persons, in order to relieve their minds, must not only discontinue to read and write, but engage in some employment or diversion that will so far occupy the thoughts as to make them forget the business of the closet. A solitary ride or walk are so far from relaxing the mind, that they rather encourage thought. Nothing can divert the mind when it gets into a train of serious thinking, but attention to subjects of a more trivial nature. These prove a kind of play to the mind, and consequently relieve it.

Learned men often contract a contempt for what they call trifling company. They are ashamed to be seen with any but philosophers. This however is no proof of their being philosophers themselves. No man deserves that name who is ashamed to unbend his mind, by associating with the cheerful and gay. Even the society of children will relieve the mind and expel the gloom which application to study is too apt to occasion.

As studious people are necessarily much within doors, they should make choice of a large and well aired place for study. This would not only prevent the bad effects which attend confined air, but would cheer the spirits, and have a most happy influence both on the body and mind. It is said of Euripedes the tragedian, that he used to retire to a dark cave to compose his tragedies; and of Demosthenes the Grecian orator, that he chose a place for study where nothing could be either heard or seen. With all deference to such venerable names, we cannot help condemning their taste. A man may surely think to as good purpose in an elegant apartment as in a cave; and may have as happy conceptions where the all-cheering rays of the sun render the air wholesome, as in places where they never enter.

Those who read and write much should be very attentive to their posture. They ought to sit and stand by turns, always keeping as nearly in an erect posture as possible. Those who dictate, may do it walking. It has an excellent effect frequently to read or speak aloud. This not only exercises the lungs, but almost the whole body. Hence studious people are greatly benefited by delivering discourses in public. Public speakers, indeed, sometimes hurt themselves by overacting their part; but this is their own fault. The martyr to mere vociferation merits not our sympathy.

The morning has, by all medical writers, been reckoned the best time for study. It is so. But it is also the most proper season for exercise, while the stomach is empty, and the spirits refreshed with sleep. Studious people should therefore sometimes spend the morning in walking, riding, or some manly diversions without doors. This would make them return to study with greater alacrity, and would be of more service than twice the time after their spirits are worn out with fatigue. It is not sufficient to take diversion only when we can think no longer. Every studious person should make it part of his business, and should let nothing interrupt his hours of recreation more than those of study.

Music has a very happy effect in relieving the mind when fatigued with study. It would be well if every studious person were so far acquainted with that science as to amuse himself after severe thought by

playing such airs as have a tendency to raise the spirits, and inspire cheerfulness and good humour.

It is a reproach to learning, that any of her votaries, to relieve the mind after study, should betake themselves to the use of strong liquors. This indeed is a remedy; but it is a desperate one, and always proves destructive. Would such persons, when their spirits are low, get on horseback, and ride ten or a dozen miles, they would find it a more effectual remedy than any cordial medicine in the apothecary's shop, or all the strong liquors in the world.

It is much to be regretted, that learned men, while in health, pay so little regard to these things. There is not any thing more common than to see a miserable object over-run with nervous diseases, bathing, walking, riding, and, in a word, doing ever thing for health after it is gone; yet, if any one had recommended these things to him by way of prevention, the advice would, in all probability, have been treated with contempt, or at least, with neglect. Such is the weakness and folly of mankind, and such the want of foresight, even in those who ought to be wiser than others!

With regard to the diet of the studious, we see no reason why they should abstain from any kind of food that is wholesome, provided they use it in moderation. They ought, however, to be sparing in the use of every thing that is windy, rancid or hard of digestion. Their suppers should always be light, or taken soon in the evening. Their drink may be water, fine malt liquor not too strong, good cyder, wine and water, or, if troubled with acidities, water mixed with a little brandy, or any other genuine spirit.

We shall only observe, with regard to those kinds of exercise which are most proper for the studious, that they should not be too violent, nor ever carried to the degree of excessive fatigue. They ought likewise to be frequently varied so as to give action to all the different parts of the body; and should, as often as possible, be taken in the open air. In general, riding on horseback, walking, working in a garden, or playing at some active diversions, are the best.

We would likewise recommend the use of the cold bath to the studious. It will, in some measure, supply the place of exercise, and should not be neglected by persons of a relaxed habit, especially in the warm season.

No person ought either to take violent exercise or to study immediately after a full meal.

CHAP. III.

OF ALIMENT.

UNWHOLESOME food, and irregularities of diet, occasion many diesases. There is no doubt but the whole constitution of body may be changed by diet alone. The fluids may be thereby attenuated or condensed, rendered mild or acrimonious, coadjulated or diluted, to almost any degree. Nor are its effects upon the solids less considerable.

They may be braced or relaxed, have their sensibility, motions, &c. greatly increased or diminished, by different kinds of aliment. A very small attention to these things will be sufficient to shew how much the preservation of health depends upon a proper regimen of the diet.

Nor is an attention to diet necessary for the preservation of health only: it is likewise of importance in the cure of diseases. Every intention in the cure of many diseases may be answered by diet alone. Its effects, indeed, are not always so quick as those of medicine, but they are generally more lasting: besides, it is neither so disagreeable to the patient, nor so dangerous as medicine, and is always more easily obtained.

Our intention here is not to enquire minutely into the nature and properties of the various kinds of aliment in use among mankind; nor to shew their effects upon the different constitutions of the human body; but to mark some of the most pernicious errors which people are apt to fall into, with respect both to the quantity and quality of their food, and to point out their influence upon health.

It is not indeed an easy matter to ascertain the exact quantity of food proper for every age, sex, and constitution: but a scrupulous nicety here is by no means necessary. The best rule is to avoid all extremes. Mankind were never intended to weigh and measure their food. Nature teaches every creature when it has enough; and the calls of thirst and hunger are sufficient to inform them when more is necessary.

Though *moderation* is the chief rule with regard to the quantity, yet the quality of foodmerits a farther consideration. There are many ways by which provisions may be rendered unwholesome. Bad seasons may either prevent the ripening of grain, or damage it afterwards. These, indeed, are acts of Providence, and we must submit to them; but surely no punishment can be too severe for those who suffer provisions to spoil by hoarding them, on purpose to raise the price.

The poor, indeed, are generally the first who suffer by unsound provisions; but the lives of the labouring poor are of great importance to the state: besides, diseases occasioned by unwholesome food often prove infectious, by which means they reach people in every station; it is therefore the interest of all to take care that no spoilt provisions of any kind be exposed to sale.

Animal, as well as vegetable food, may be rendered unwholesome by being kept too long. All animal substances have a constant tendency to putrefaction; and, when that has proceeded too far, they not only become offensive to the senses, but hurtful to the health. Diseased animals and such as die of themselves ought never to be eaten. It is a common practice, however, in some grazing countries, for servants and poor people to eat such animals as die of any disease or are killed by accident. Poverty, indeed, may oblige people to do this; but they had better eat a smaller quantity of what is sound and wholesome: it would both afford a better nourishment, and be attended with less danger.

The injunctions given to the Jews, not to eat any creature which

died of itself, seem to have a strict regard to health; and ought to be observed by Christians as well as Jews. Animals never die themselves without some previous disease; but how a diseased animal should be wholesome food, is inconceivable: even those which die by accident must be hurtful, as their blood is mixed with the flesh, and soon turns putrid.

Animals which feed grossly, as tame ducks, hogs, &c. are neither so easily digested, nor afford such wholesome nourishment as others. No animal can be wholesome which does not take sufficient exercise. Most of our stalled cattle are crammed with gross food, but not allowed exercise nor free air; by which means they indeed grow fat, but their juices not being properly prepared or assimulated, remain crude, and occasion indigestions, gross humours, and oppression of the spirits, in those who feed upon them.

Animals are often rendered unwholesome by being overheated. Excessive heat causes a fever, exalts the animal salts, and mixes the blood so intimately with the flesh, that it cannot be separated. For this reason, butchers should be severely punished who overdrive their cattle. No person would chuse to eat the flesh of an animal which had died in a high fever; yet that is the case with all over-drove cattle; and the fever is often raised even to a degree of madness.

But this is not the only way by which butchers render meat unwholesome. The abominable custom of filling the cellular membrane of animals with air, in order to make them appear fat, is every day practised. This not only spoils the meat, and renders it unfit for keeping, but is such a dirty trick, that the very idea of it is sufficient to disgust a person of any delicacy at every thing which comes from the shambles. Who can bear the thought of eating meat which has been blown up with air from the lungs of a dirty fellow, perhaps labouring under the very worst of diseases?

No people in the world eat such quantities of animal food as the English, which is one reason why they are so generally tainted with the scurvy and its numerous train of consequences, indigestion, low spirits, hypochondriacism, &c. Animal food was surely designed for man, and, with a proper mixture of vegetables, it will be found the most wholesome; but to gorge beef, mutton, pork, fish, and fowl, twice or thrice a day, is certainly too much. All who value health ought to be contented with making one meal of flesh in the twenty-four hours, and this ought to consist of one kind only.

The most obstinate scurvy has often been cured by a vegetable diet; nay, milk alone will frequently do more in that disease than any medicine. Hence it is evident, that if vegetables and milk were more used in diet, we should have less scurvy, and likewise fewer putrid and inflammatory fevers.

Our aliment ought neither to be too moist nor too dry. Moist aliment relaxes the solids, and renders the body feeble. Thus we see females, who live much on tea and other watery diet, generally become weak and unable to digest solid food: hence proceed hysterics, and all their dreadful consequences. On the other hand, food that is too dry renders the solids in a manner rigid, and the humours

viscid, which disposes the body to inflammatory fevers, scurvies, and the like.

Much has been said on the ill effects of tea in diet. They are, no doubt, numerous; but they proceed rather from the imprudent use of it than from any bad qualities in the tea itself. Tea is now the universal breakfast in this part of the world; but the morning is surely the most improper time of the day for drinking it. Most delicate persons, who, by the bye, are the greatest tea drinkers, cannot eat any thing in the morning. If such persons, after fasting ten or twelve hours, drink four or five cups of green tea without eating almost any bread, it must hurt them. Good tea when taken in a moderate quantity, not too strong, nor too hot, nor drank upon an empty stomach, will seldom do harm; but if it be bad, which is often the case, or substituted in the room of solid food, it must have many ill effects.

The arts of cookery render many things unwholesome, which are not so in their own nature. By jumbling together a number of different ingredients, in order to make a poignant sauce, or rich soup, the composition proves almost a poison. All high seasoning, pickles, &c. are only incentives to luxury, and never fail to hurt the stomach. It were well for mankind, if cookery, as an art, were entirely prohibited. Plain roasting or boiling is all that the stomach requires. These alone are sufficient for people in health, and the sick have still less need of a cook.

The liquid part of our aliment likwise claims our attention. Water is not only the basis of most liquors, but also composes a great part of our solid food. Good water must therefore be of the greatest importance in diet. The best water is that which is most pure, and free from any mixture of foreign bodies. Water takes up parts of most bodies with which it comes into contact; by this means it is often impregnated with metals or minerals of a hurtful or poisonous nature. Hence the inhabitants of some hilly countries have peculiar diseases, which in all probability proceed from the water. Thus the people who live near the Alps in Switzerland, and the inhabitants of the Peak of Derby in England, have large tumours or wens on their necks. This disease is generally imputed to the snow water; but there is more reason to believe it is owing to the minerals in the mountains through which the waters pass.

When water is impregnated with foreign bodies, it generally appears by its weight, colour, taste, smell, heat, or some other sensible quality. Our business therefore is to chuse such water for common use, as is lightest, and without any particular colour, taste, or smell. In most places of Britain the inhabitants have it in their power to make choice of their water; and few things would contribute more to health than a due attention to this article. But mere indolence often induces people to make use of the water that is nearest to them, without considering its qualities.

Before water is brought into great towns, the strictest attention ought to be paid to its qualities, as many diseases may be occasioned or aggravated by bad water; and when once it has been procured at a great expence, people are unwilling to give it up.

The common methods of rendering water clear by filteration, or soft by exposing it to the sun and air, &c. are so generally known, that it is unnecessary to spend time in explaining them. We shall only, in general, advise all to avoid waters which stagnate long in small lakes, ponds, or the like, as such waters often become putrid, by the corruption of animal and vegetable bodies with which they abound. Even cattle frequently suffer by drinking, in dry seasons, water which has stood long in small reservoirs, without being supplied by springs, or freshened with showers. All wells ought to be kept clean, and to have a free communication with the air.

As fermented liquors, notwithstanding they have been exclaimed against by many writers, still continue to be the common drink of almost every person who can afford them, we shall rather endeavour to assist people in the choice of these liquors, than pretend to condemn what custom has so firmly established. It is not the moderate use of sound fermented liquors which hurts mankind; it is excess, and using such as are ill prepared or vitiated.

Fermented liquors which are too strong, hurt digestion; and the body is so far from being strengthened by them, that it is weakened and relaxed. Many imagine that hard labour could not be supported without drinking strong liquors: but it is a very erroneous notion. Men who never taste strong liquors are not only able to endure more fatigue, but also live much longer than those who use them daily. But suppose strong liquors did enable a man to do more work, they must nevertheless waste the power of life, and occasion premature old age. They keep up a constant fever, which exhausts the spirits, inflame the blood, and disposes the body to numberless diseases.

But fermented liquors may be too weak as well as too strong; when that is the case, they must either be drank new, or they become sour and dead: when such liquors are drank new, the fermentation not being over, they generate air in the bowels, and occasion flatulencies; and, when kept till stale, they turn sour on the stomach, and hurt digestion. For this reason, all malt-liquors, cyder, &c. ought to be of such strength as to keep till they be ripe, and then they should be used. When such liquors are kept too long, though they should not become sour, yet they generally contract a hardness, which renders them unwholesome.

All families who can, ought to prepare their own liquors. Since preparing and vending of liquors became one of the most general branches of business, every method has been tried to adulterate them. The great object both to the makers and venders of liquor is, to render it intoxicating, and give it the appearance of age. But it is well known that this may be done by other ingredients than those which ought to be used for making it strong. It would be imprudent even to name those things which are daily made use of to render liquors heady. Suffice it to say, that the practice is very common, and that all the ingredients used for this purpose are of a narcotic or stupefactive quality. But as all opiates are poisonous, it is easy to see what must be the consequence of their general use. Though they do

not kill suddenly, yet they hurt the nerves, relax and weaken the stomach, and spoil the digestion.

Were fermented liquors faithfully prepared, kept to a proper age, and used in moderation, they would prove real blessings to mankind. But, while they are ill prepared, various ways adulterated, and taken to excess, they must have many pernicious effects.

We would recommend it to families, not only to prepare their own liquors, but likewise their bread. Bread is so necessary a part of diet, that too much care cannot be bestowed in order to have it sound and wholesome. For this purpose, it is not only necessary that it be made of good grain, but likewise properly prepared, and kept free from all unwholesome ingredients. This, however, we have reason to believe is not always the case with bread prepared by those who make a trade of vending it. Their object is rather to please the eye, than to consult the health. The best bread is that which is neither too coarse nor too fine ; well fermented, and made of wheat flower, or rather of wheat and rye mixed together.

To specify the different kind of aliment, to explain their nature and properties, and to point out their effects in different constitutions, would far exceed the limits of our design. Instead of a detail of this kind, which would not be generally understood, and of course little attended to, we shall only mention the following easy rules with respect to the choice of aliment.

Persons whose solids are weak and relaxed, ought to avoid all viscid food, or such things as are hard of digestion. Their diet, however, ought to be nourishing; and they should take sufficient exercise in the open air.

Such as abound with blood should be sparing in the use of every thing that is highly nourishing, as fat meat, rich wines, strong ale, and such like. Their food should consist chiefly of bread and other vegetable substances ; and their drink ought to be water, whey, and the like.

Fat people should not eat freely of oily nourishing diet. They ought frequently to use radish, garlic, spices, or such things as are heating, and promote perspiration and urine. Their drink should be water, coffee, tea, or the like; and they ought to take much exercise and little sleep.

Those who are too lean must follow an opposite course.

Such as are troubled with acidities, or whose food is apt to sour on the stomach, should live much on animal food ; and those who are afflicted with hot alkaline eructations, ought to use a diet consisting chiefly of acid vegetables.

People who are affected with the gout, low spirits, hypochondriac or hysteric disorders, ought to avoid all flatulent food, every thing that is viscid, or hard of digestion, all salted or smoak-dried provisions, and whatever is austere, acid, or apt to turn sour on the stomach. Their food should be light, spare, cool, and of an opening nature.

The diet ought not only to be suited to the age and constitution, but also to the manner of life: a sedentary or studious person should live more sparingly than one who labours hard without doors. Many

kinds of food will nourish a peasant very well which would be almost indigestable to a citizen; and the latter will live upon a diet on which the former would starve.

Diet ought not to be too uniform. The constant use of one kind of food might have some bad effects. Nature teaches us this by the great variety of aliment which she has provided for man, and likewise by giving him an appetite for different kinds of food.

Those who labour under any particular disease, ought to avoid such aliments as have a tendency to increase it; for example, a gouty person should not indulge in rich wines, strong soups, or gravies, and should avoid all acids. One who is troubled with the gravel, ought to shun all austere and astringent aliments; and those who are scorbutic should be sparing in the use of salted animal food.

In the first period of life, our food ought to be light, but nourishing, and frequently taken. Food that is solid, with a sufficient degree of tenacity, is most proper for the state of manhood. The diet suited to the last period of life, when nature is upon the decline, approaches nearly to that of the first. It should be lighter and more succulent than that of vigorous age, and likewise more frequently taken.

It is not only necessary for health that our diet be wholesome, but also that it be taken at regular periods. Some imagine long fasting will atone for excess; but this, instead of mending the matter, generally makes it worse. When the stomach and intestines are overdistended with food, they lose their proper tone, and by long fasting they become weak, and inflated with wind. Thus, either gluttony or fasting destroys the powers of digestion.

The frequent repetition of aliment is not only necessary for repairing the continual waste of our bodies, but likewise to keep the fluids sound and sweet. Our humours, even in the most healthy state, have a constant tendency to putrefaction, which can only be prevented by frequent supplies of fresh nourishment: when that is wanting too long, the putrefaction often proceeds so far as to occasion very dangerous fevers. From hence we may learn the necessity of regular meals. No person can enjoy a good state of health whose vessels are either frequently overcharged, or the humours long deprived of fresh supplies of chyle.

Long fasting is extremely hurtful to young people; it not only vitiates their humours, but prevents their growth. Nor is it less injurious to the aged. Most persons in the decline of life, are afflicted with wind: this complaint is not only increased, but even rendered dangerous, and often fatal, by long fasting. Old people, when their stomachs are empty, are frequently seized with giddiness, head-aches, and faintness. These complaints may generally be removed by a piece of bread and a glass of wine, or taking any other solid food; which plainly points out the method of preventing them.

It is more than probable, that many of the sudden deaths which happen in the advanced periods of life, are occasioned by fasting too long, as it exhausts the spirits, and fills the bowels with wind; we would therefore advise people in the decline of life, never to allow

their stomachs to be too long empty. Many people take nothing but a few cups of tea and a little bread, from nine o'clock at night till two or three next afternoon. Such may be said to fast almost three fourths of their time. This can hardly fail to ruin the appetite, vitiate the humours, and fill the bowels with wind; all which might be prevented by a solid breakfast.

It is a very common practice to eat a light breakfast and a heavy supper. This custom ought to be reversed. When people sup late, their supper should be very light; but the breakfast ought always to be solid. If any one eats a light supper, goes soon to bed, and rises betimes in the morning, he will be sure to find an appetite for his breakfast, and he may freely indulge it.

The strong and healthy do not indeed suffer so much from fasting as the weak and delicate; but they run great hazard from its opposite, viz. repletion. Many diseases, especially fevers, are the effects of a plethora, or too great fulness of the vessels. Strong people, in high health, have generally a great quantity of blood and other humours. When these are suddenly increased, by an overcharge of rich and nourishing diet, the vessels become too much distended, and obstructions and inflammations ensue. Hence so many people are seized with inflammatory and eruptive fevers, apoplexies, &c. after a feast or debauch.

All great and sudden changes in diet, are dangerous. What the stomach has been long accustomed to digest, though less wholesome, will agree better with it than food of a more salutary nature to which it has not been used. When therefore a change becomes necessary, it ought always to be made gradually: a sudden transition from a poor and low, to a rich and luxurious diet, or the contrary, might so disturb the functions of the body as to endanger health, or even to occasion death itself.

When we recommend regularity in diet, we would not be understood as condemning every small deviation from it. It is next to impossible for people at all times to avoid some degree of excess, and living too much by rule might make even the smallest deviation dangerous. It may therefore be prudent to vary a little, sometimes taking more, sometimes less, than the usual quantity of meat and drink, provided always that a due regard be paid to moderation.

CHAP. IV.

OF AIR.

UNWHOLESOME air is a very common cause of diseases. Few are aware of the danger arising from it. People generally pay some attention to what they eat and drink, but seldom regard what goes into the lungs, though the latter proves often more suddenly fatal than the former.

Air, as well as water, takes up parts of most bodies with which it

comes in contact, and is often so replenished with those of a noxious quality, as to occasion immediate death. But such violent effects seldom happen, as people are generally on their guard against them. The less perceptable influences of bad air prove more generally hurtful to mankind; we shall therefore endeavour to point out some of these, and to shew whence the danger chiefly arises.

Air may become noxious many ways. Whatever greatly alters its degree of heat, cold, moisture, &c. renders it unwholesome: for example, that which is too hot dissipates the watery parts of the blood, exalts the bile, and renders the whole humours adust and thick. Hence proceed billious and inflammatory fevers, cholera morbus, &c. Very cold air obstructs the perspiration, constringes the solids, and condenses the fluids. It occasions rheumatisms, coughs, and catarrhs, with other diseases of the throat and breast. Air that is too moist destroys the elasticity or spring of the solids, induces phlegmatic or lax constitutions, and disposes the body to agues, or intermitting fevers, dropsies, &c.

Wherever great numbers of people are crowded into one place, if the air has not a free circulation, it soon becomes unwholesome. Hence it is that delicate persons are so apt to turn sick or faint in crowded churches, assemblies, or any place where the air is injured by breathing, fires, candles, or the like.

In great cities so many things tend to contaminate the air, that it is no wonder it proves so fatal to the inhabitants. The air in cities is not only breathed repeatedly over, but is likewise loaded with sulphur, smoak, and other exhalations, besides the vapours continually arising from innumerable putrid substances, as dunghills, slaughter-houses, &c. All possible care should be taken to keep the streets of large towns open and wide, that the air may have a free current through them. They ought likewise to be kept very clean. Nothing tends more to pollute and contaminate the air of a city than dirty streets.

It is very common in this country to have church-yards in the middle of populous cities. Whether this be the effect of ancient superstition, or owing to the increase of such towns, is a matter of no consequence. Whatever gave rise to the custom, it is a bad one. It is habit alone which reconciles us to these things; by means of which the most ridiculous, nay, pernicious customs, often become sacred. Certain it is, that thousands of putrid carcases, so near the surface of the earth, in a place where the air is confined, cannot fail to taint it; and that such air when breathed into the lungs, must occasion diseases.

Burying within churches is a practice still more detestable. The air in churches is seldom good, and the effluvia from putrid carcases must render it still worse. Churches are commonly old buildings with arched roofs. They are seldom opened above once a week, are never ventilated by fires nor open windows, and rarely kept clean. This occasions that damp, musty, unwholesome smell which one feels on entering a church, and renders it a very unsafe place for the weak and valetudinary. These inconveniences might in a great measure be

obviated, by prohibiting all persons from burying within churches, by keeping them clean, and permitting a stream of fresh air to pass frequently through them.

Wherever air stagnates long, it becomes unwholesome. Hence the unhappy persons confined in jails not only contract malignant fevers themselves, but often communicate them to others. Nor are many of the holes, for we cannot call them houses, possessed by the poor in great towns, much better than jails. These low dirty habitations are the very lurking places of bad air and contagious diseases. Such as live in them seldom enjoy good health; and their children commonly die young. In the choice of a house, those who have it in their power ought always to pay the greatest attention to fresh air.

The various methods which luxury has invented to make houses close and warm, contribute not a little to render them unwholesome. No house can be wholesome unless the air has a free passage through it; for which reason houses ought daily to be ventilated by opening opposite windows, and admitting a current of fresh air into every room. Beds, instead of being made up as soon as people rise out of them, ought to be turned down, and exposed to the fresh air from the open windows through the day. This would expel any noxious vapour, and could not fail to promote the health of the inhabitants.

In hospitals, jails, ships, &c. where that cannot be conveniently done, ventilators should be used. The method of expelling foul, and introducing fresh air, by means of ventilators, is a most salutary invention, and is indeed the most useful of all our modern medical improvements. It is capable of universal application, and is fraught with numerous advantages, both to those in health and sickness. In all places, where numbers of people are crowded together, ventilation becomes absolutely necessary.

Air which stagnates in mines, wells, cellars, &c. is extremely noxious. That kind of air is to be avoided as the most deadly poison; it often kills almost as quickly as lightning. For this reason, people should be very cautious in opening cellars that have been long shut, or going down into deep wells or pits, especially if they have been kept close covered.

Many fatal accidents might be prevented by only letting down a lighted candle before them, and stopping when they perceive it to go out; yet this precaution, simple as it is, is seldom used.

Many people who have splendid houses, chuse to sleep in small apartments. This conduct is very improper. A bed chamber ought always to be well aired; as it is generally occupied in the night only, when all windows and doors are shut. If a fire be kept in it, the danger from a small room becomes still greater. Numbers have been stifled when asleep by a fire in a small apartment, which is always hurtful.

Those who are obliged, on account of business, to spend the day in close towns, ought, if possible, to sleep in the country. Breathing free air in the night will, in some measure, make up for the want of it through the day. This practice would have a greater effect in preserving the health of citizens than is commonly imagined.

Delicate persons ought, as much as possible, to avoid the air of great towns. It is peculiarly hurtful to the asthmatic and consumptive. Such persons should avoid cities as they would a plague. The hypochondriac are likewise much hurt by it. I have often seen persons so much afflicted with this malady while in town, that it seemed impossible for them to live, who, upon being removed to the country, were immediately relieved. The same observation holds with regard to nervous and hysteric women. Many people indeed have it not in their power to change their situation in quest of better air. All we can say to such persons is, that they should go as often abroad into the open air as they can, that they should admit fresh air frequently into their houses, and take care to keep them very clean.

It was necessary in former times, for safety, to surround cities, colleges, and even single houses, with high walls. These, by obstructing the free current of air, never fail to render such places damp and unwholesome. As such walls are now, in most parts of this country, become useless, they ought to be pulled down, and every method taken to admit a free passage to the air. Proper attention to AIR and CLEANLINESS would tend more to preserve the health of mankind than all the endeavours of the faculty.

Surrounding houses too closely with planting or thick woods, likewise tends to render the air unwholesome. Wood not only obstructs the free current of the air, but sends forth great quantities of moist exhalations, which render it constantly damp. Wood is very agreeable at a proper distance from a house, but should never be planted too near it, especially in a flat country. Many of the gentlemen's seats in England are rendered very unwholesome from the great quantity of wood which surrounds them.

Houses situated in low marshy countries, or near large lakes of stagnant water, are likewise unwholesome. Waters which stagnate not only render the air damp, but load it with putrid exhalations, which produce the most dangerous and fatal diseases. Those who are obliged to inhabit marshy countries, ought to make choice of the dryest situations they can find, to live generously, and to pay the strictest regard to cleanliness.

If fresh air be necessary for those in health, it is still more so for the sick, who often lose their lives for want of it. The notion that sick people must be kept very hot, is so common, that one can hardly enter the chamber where a patient lies, without being ready to faint, by reason of the hot suffocating smell. How this must affect the sick, any one may judge. No medicine is so beneficial to the sick as fresh air. It is the most reviving of all cordials, if it be administered with prudence. We are not, however, to throw open doors and windows at random upon the sick. Fresh air is to be let into the chamber gradually, and, if possible, by opening the windows of some other apartment.

The air of a sick person's chamber may be greatly freshened, and the patient much revived, by sprinkling the floor, bed, &c. frequently with vinegar, juice of a lemon, or any other strong vegetable acid.

In places were numbers of sick are crowded into the same house, or, which is often the case, into the same apartment, the frequent admission of fresh air becomes absolutely necessary. Infirmaries

hospitals, &c. are often rendered so noxious, for want of proper ventilation, that the sick run more hazard from them than from the disease. This is particularly the case when putrid fevers, dysentaries, and other infectious diseases, prevail.

Physicians, surgeons, and others who attend hospitals, ought, for their own safety, to take care that they be properly ventilated. Such persons as are obliged to spend most of their time among the sick, run great hazard of being themselves infected when the air is bad. All hospitals and places of reception for the sick ought to have an open situation, at some distance from any great town; and such patients as labour under any contagious disease ought never to be suffered to come near the rest.

CHAP. IV.

OF EXERCISE.

MANY people look upon the necessity man is under of earning his bread by labour, as a curse. Be this as it may, it is evident, from the structure of the body, that exercise is not less necessary than food for the preservation of health: those whom poverty obliges to labour for daily bread are not only the most healthy, but generally the most happy part of mankind. Industry seldom fails to place them above want, and activity serves them instead of physic. This is peculiarly the case with those who live by the culture of the ground. The great increase of inhabitants in infant colonies, and the longevity of such as follow agriculture every where, evidently prove it to be the most healthful as well as the most useful employment.

The love of activity shews itself very early in man. So strong is this principle, that a healthy youth cannot be restrained from exercise, even by the fear of punishment. Our love of motion is surely a strong proof of its utility. Nature implants no disposition in vain. It seems to be a catholic law throughout the whole animal creation, that no creature without exercise, should enjoy health, or be able to find subsistence. Every creature except man, takes as much of it as is necessary. He alone, and such animals as are under his direction, deviate from this original law, and they suffer accordingly.

Inactivity never fails to induce an universal relaxation of the solids, which disposes the body to innumerable diseases. When the solids are relaxed, neither the digestion nor any of the secretions can be duly performed. In this case, the worst consequences must ensue. How can persons who loll all day in easy chairs, and sleep all night on beds of down, fail to be relaxed? Nor do such greatly mend the matter who never stir abroad but in a coach, sedan, or such like. These elegant pieces of luxury are become so common, that the inhabitants of great towns seem to be in some danger of losing the use of their limbs altogether. It is now below any one to walk who can afford to be carried. How ridiculous it would seem to a person unacquainted with modern luxury, to behold the young and healthy swinging along on the shoulders of their fellow creatures! or to see a fat

carcass, over-run with diseases, occasioned by inactivity, dragged through the streets by half a dozen horses!

Glandular obstructions, now so common, generally proceed from inactivity. These are the most obstinate of maladies. So long as the liver, kidnies, and other glands, duly perform their functions, health is seldom impaired; but when they fail, nothing can restore it. Exercise is almost the only cure we know for glandular obstructions; indeed, it does not always succeed as a remedy; but there is reason to believe that it would seldom fail to prevent these complaints, were it used in due time. One thing is certain, that, amongst those who take sufficient exercise, glandular diseases are very little known; whereas the indolent and inactive are seldom free from them.

Weak nerves are the constant companions of inactivity. Nothing but exercise and open air can brace and strengthen the nerves, or prevent the endless train of diseases which proceed from a relaxed state of these organs. We seldom hear the active or laborious complain of nervous diseases; these are reserved for the sons of ease and affluence. Many have been completely cured of these disorders by being reduced, from a state of opulence, to labour for their daily bread. This plainly points out the sources from whence nervous diseases flow, and the means by which they may be prevented

It is absolutely impossible to enjoy health, where the perspiration is not duly carried on; but that can never be the case where exercise is neglected. When the matter which ought to be thrown off by perspiration is retained in the body, it vitiates the humours, and occasions the gout, fevers, rheumatism, &c. Exercise alone would prevent many of those diseases which cannot be cured, and would remove others where medicine proves ineffectual.

A late author (Cheyne), in his excellent Treatise on Health, says that the weak and valetudinary ought to make exercise a part of their religion. We would recommend this, not only to the weak and valetudinary, but to all whose business does not oblige them to take sufficient exercise, as sedentary artificers, shopkeepers, studious persons, &c. Such ought to use exercise as regularly as they take food. This might generally be done without any interruption to business or real loss of time.

Sedentary occupations ought chiefly to be followed by women. They bear confinement much better than men, and are fitted for every kind of business which does not require much strength. It is ridiculous enough to see a lusty fellow making pins, needles, or watch wheels, while many of the laborious parts of husbandry are carried on by the other sex. The fact is, we want men for laborious employments, while one half of the other sex are rendered useless for want of occupations suited to their strength, &c. Were girls bred to the loom or other mechanical employments, we should not see such numbers of them prostitute themselves for bread, nor find such a want of men for the important purposes of navigation and agriculture.

No piece of indolence hurts the health more than the modern custom of lying a-bed too long in a morning. This is the general practice in great towns. The inhabitants of cities seldom rise before eight or

nine o'clock; but the morning is undoubtedly the best time for exercise, while the stomach is empty, and the body refreshed with sleep. Besides, the morning air braces and strengthens the nerves, and in some measure answers the purpose of a cold bath. Let any one who has been accustomed to lay a-bed till eight or nine o'clock, rise by six or seven, spend a couple of hours in walking, riding, or any active diversion without doors, and he will find his spirits cheerful and serene through the day, his appetite keen, and his body braced and strengthened. Custom soon renders early rising agreeable, and nothing contributes more to the preservation of health.

The inactive are continually complaining of pains in the stomach, flatulencies, indigestions, &c. These complaints, which pave the way to many others, are not to be removed by medicines. They can only be cured by a vigorous course of exercise, to which indeed they seldom fail to yield.

Exercise if possible, ought always to be taken in the open air. When that cannot be done, various methods may be contrived for exercising the body within doors, as the dumb bell, dancing, fencing, &c. It is not necessary to adhere strictly to any particular kind of exercise. The best way is to take them by turns, and to use that longest which is most suitable to the strength and constitution. Those kinds of exercise which give action to most of the bodily organs are always to be preferred, as walking, running, riding, digging, swimming, and such like.

It is much to be regretted, that active and manly diversions are now so little practised. Diversions make people take more exercise than they otherwise would do, and are of the greatest service to such as are not under the necessity of labouring for their bread. As active diversions lose ground, those of a sedentary kind seem to prevail. Sedentary diversions are of no other use but to consume time. Instead of relieving the mind they often require more thought than either study or business. Every thing that induces people to sit still, unless it be some necessary employment, ought to be avoided.

The diversions which afford the best exercise are hunting, shooting, playing at cricket, hand ball, bowling, golff. Golff is a diversion very common in North Britain. It is well calculated for exercising the body, and may always be taken in such moderation, as neither to over-heat nor fatigue. It has greatly the preference over cricket, tennis, or any of those games that cannot be played without violence. These exercise the limbs, promote perspiration, and the other secretions. They likewise strengthen the lungs, and give firmness and agility to the whole body.

Such as can, ought to spend two or three hours a-day on horseback; those who cannot ride, should employ the same time in walking. Exercise should never be continued too long. Over-fatigue prevents the benefit of exercise, and instead of strengthening the body tends to weaken it.

Every man should lay himself under some sort of necessity to take exercise. Indolence, like other vices when indulged, gains ground, and at length becomes agreeable. Hence many who were fond of exercise

in the early part of life, become quite averse to it afterwards. This is the case of most hypochondriac, and gouty people, which renders their diseases in a great measure incurable.

In some countries laws have been made, obliging every man, of whatever rank, to learn some mechanical employment. Whether such laws were designed for the preservation of health, or the encouragement of manufactures, is a question of no importance. Certain it is that if gentlemen were frequently to amuse and exercise themselves in this way, it might have many good effects. They would at least derive as much honour from a few masterly specimens of their own workmanship, as from the character of having ruined most of their companions by gaming or drinking. Besides, men of leisure, by applying themselves to the mechanical arts, might improve them, to the great benefit of society.

Indolence not only occasions diseases, and renders men useless to society; but promotes all manner of vice. To say a man is idle, is little better than to call him vicious. The mind, if not engaged in some useful pursuit, is constantly in quest of ideal pleasures, or impressed with the apprehension of some imaginary evil. From these sources proceed most of the miseries of mankind. Certainly man was never intended to be idle. Inactivity frustrates the very design of his creation: whereas an active life is the best guardian of virtue, and the greatest preservative of health.

CHAP. VI.

Of SLEEP and CLOTHING.

SLEEP, as well as diet, ought to be duly regulated. Too little sleep weakens the nerves, exhausts the spirits, and occasions diseases; and too much renders the mind dull, the body gross, and disposes to apoplexies, lethargies, and other complaints of a similar nature. A medium ought therefore to be observed; but this is not easy to fix. Children require more sleep than grown persons, the laborious than the idle, and such as eat and drink freely, than those who live abstemiously. Besides, the real quantity of sleep cannot be measured by time; as one person will be more refreshed by five or six hours sleep, than another by eight or ten.

Children may always be allowed to take as much sleep as they please; but for adults, six or seven hours is certainly sufficient, and no one ought to exceed eight. Those who lie a-bed more than eight hours may slumber, but they can hardly be said to sleep; such generally toss and dream away the fore part of the night, sink to rest towards morning, and dose till noon. The best way to make sleep sound and refreshing is to rise betimes. The custom of lying a-bed for nine or ten hours not only makes the sleep less refreshing, but relaxes the solids, and greatly weakens the constitution.

Nature points out night as the proper season for sleep. Nothing more certainly destroys the constitution than night-watching. It is great pity that a practice so destructive to health should be so much in

fashion. How quickly the want of rest in due season will blast the most blooming complexion, or ruin the best constitution, is evident from the ghastly countenances of those who, as the phrase is, turn day into night, and night into day.

To make sleep refreshing, the following things are requisite: first, to take sufficient exercise in the open air; to avoid strong tea or coffee; next, to eat a light supper; and lastly, to lie down with a mind as cheerful and serene as possible.

It is certain that too much exercise will prevent sleep, as well as too little. We seldom however hear the active and laborious complain of restless nights. It is the indolent and slothful who generally have these complaints. Is it any wonder that a bed of down should not be refreshing to a person who sits all day in an easy chair? A great part of the pleasure of life consists in alternate rest and motion; but they who neglect the latter can never relish the former. The labourer enjoys more true luxury in plain food and sound sleep, than is to be found in sumptuous tables and downy pillows, where exercise is wanting.

That light suppers cause sound sleep is true even to a proverb. Many persons, if they exceed the least at that meal, are sure to have uneasy nights; and, if they fall asleep, the load and oppression on their stomach and spirits occasion frightful dreams, broken and disturbed repose, the nightmare, &c. Were the same persons to go to bed with a light supper, or sit up till that meal was pretty well digested, they would enjoy sound sleep, and rise refreshed and cheerful. There are indeed some people who cannot sleep unless they have eaten some solid food at night, but this does not imply the necessity of a heavy supper; besides, these are generally persons who have accustomed themselves to this method, and who do not take a sufficient quantity of solid food and exercise in the course of the day.

Nothing more certainly disturbs our repose than anxiety. When the mind is not at ease, one seldom enjoys sound sleep. This greatest of human blessings flies the wretched, and visits the happy, the cheerful, and the gay. This is a sufficient reason why every man should endeavour to be as easy in his mind as possible when he goes to rest. Many, by indulging grief and anxious thought, have banished sound sleep so long, that they could never afterwards enjoy it.

Sleep, when taken in the fore part of the night, is generally reckoned most refreshing. Whether this be the effect of habit or not, is hard to say; but as most people are accustomed to go early to bed when young, it may be presumed that sleep, at this season, will prove more refreshing to them ever after. Whether the fore part of the night be best for sleep or not, surely the fore part of the day is fittest both for business and amusement. I hardly ever knew an early riser who did not enjoy a good state of health.

It consists with observation, that all very old men have been early risers. This is the only circumstances attending longevity to which (says Dr. BUCHAN) I never knew an exception.

OF CLOTHING.

The clothing ought to be suited to the climate. Custom has no doubt a very great influence in this article; but no custom can ever change the nature of things so far as to render the same clothing fit for an inhabitant of Nova Zembla and the island of Jamaica. It is not indeed necessary to observe an exact proportion between the quantity of clothes we wear, and the degree of latitude which we inhabit; but, at the same time proper attention ought to be paid to it, as well as to the openness of the country, the frequency and violence of storms, and other vicissitudes of the weather.

In youth, while the blood is hot and the perspiration free, it is less necessary to cover the body with a great quantity of clothes; but in the decline of life, when the skin becomes rigid and the homours more cool, the clothing should be increased. Many diseases in the latter period of life proceed from a defect of perspiration: these may, in some measure, be prevented by a suitable addition to the clothing, or by wearing such as are better calculated for promoting the discharge from the skin, as clothes made of cotton, flannel, &c.

The clothing ought likewise to be suited to the season of the year. Clothing may be warm enough for summer, which is by no means sufficient for winter. The greatest caution, however, is necessary in making these changes. We ought neither to put off our winter clothes too soon, nor to wear our summer ones too long. In this country, the winter often sets in very early with great rigour, and we have frequently cold weather even after the commencement of the summer months. It would likewise be prudent not to make the change all at once, but to do it gradually; and indeed the changes of apparel in this climate ought to be very inconsiderable, especially among those who have passed the meridian of life.

Clothes often become hurtful by their being made subservient to the purposes of pride or vanity. Mankind in all ages seem to have considered clothes in this view; accordingly their fashion and figure have been continually varying, with very little regard either to health, the climate, or conveniency: a farthingale, for example, may be very necessary in hot southern climates, but surely nothing can be more ridiculous in the cold regions of the north.

Even the human shape is often attempted to be mended by dress, and those who know no better believe that mankind would be monstrous without its assistance. All attempts of this nature are highly pernicious. The most destructive of them in this country is that of sqeezing the stomach and bowels into as narrow a compass as possible, to procure what is falsely called a fine shape. This madness seems to have pervaded the minds of mothers in every age and country. Terence, in his comedy of the Eunuch, ridicules the Roman matrons for attempting to mend the shape of their daughters. By this practice the action of the stomach and bowels, the motion of the heart and lungs, and almost all the vital functions, are obstructed. Hence proceed indigestion, syncopes or fainting fits, coughs, con-

sumptions of the lungs, and other complaints so common among females.

The feet likewise often suffer by pressure. How a small foot came to be reckoned genteel, I will not pretend to say; but certain it is, that this notion has made many persons lame. Almost nine-tenths of mankind are troubled with corns: a disease which is seldom or never occasioned but by strait shoes. Corns are not only very troublesome, but, by rendering people unable to walk, they may likewise be considered the remote cause of other diseases.

In fixing on the clothes, due care should be taken to avoid all tight bandages. Garters, buckles, &c. when drawn too tight, not only prevent the free motion and use of the part about which they are bound, but likewise obstruct the circulation of the blood, which prevents the equal nourishment and growth of these parts, and occasions various diseases. Tight bandages about the neck, as stocks, cravats, necklaces, &c. are extremely dangerous. They obstruct the blood in its course from the brain, by which means head-aches, vertigoes, apoplexies, and other fatal diseases, are often occasioned.

The perfection of dress is to be easy and clean. Nothing can be more ridiculous than for any one to make himself a slave to fine clothes. Such a one, and many such there are, would rather remain as fixt as a statue from morning till night, than discompose a single hair, or alter the position of a pin. Were we to recommend any particular pattern for dress, it would be that which is worn by the people called Quakers. They are always neat, clean, and often elegant, without any thing superfluous. What others lay out upon tawdy laces, ruffles, and ribands, they bestow upon superior cleanliness. Finery is only the affectation of dress, and very often covers a great deal of dirt.

We shall only add, with regard to clothing, that it ought not only to be suited to the climate, the season of the year, and the period of life, but likewise to the temperature and constitution. Robust persons are able to endure either cold or heat better than the delicate; consequently may be less attentive to their clothing. But the precise quantity of clothes necessary for any person cannot be determined by reasoning. It is entirely a matter of experience, and every man is the best judge for himself what quantity of clothes is necessary to keep him warm.

CHAP. VII.

OF INTEMPERANCE.

A MODERN author (Rousseau) observes, that temperance and exercise are the two best physicians in the world. He might have added, that if these were duly regarded, there would be little occasion for any other. Temperance may justly be called the parent of health; yet numbers of mankind act as if they thought diseases and death too slow in their progress, and by intemperance and debauch seem, as it were, to solicit their approach.

The danger of intemperance appears from the very construction of the human body. Health depends on that part of the solids and fluids which fits them for the due performance of the vital functions; and while these go regular on, we are sound and well; but whatever disturbs them necessarily impairs health. Intemperance never fails to disorder the whole animal œconomy; it hurts the digestion, relaxes the nerves, renders the different secretions irregular, vitiates the humours, and occasions numberless diseases.

The analogy between the nourishment of plants and animals affords a striking proof of the danger of intemperance. Moisture and manure greatly promote vegetation; yet an over-quantity of either will entirely destroy it. The best things become hurtful, nay destructive, when carried to excess. Hence we learn, that the highest degree of human wisdom consists in regulating our appetites and passions so as to avoid all extremes. It is that chiefly which entitles us to the character of rational beings. The slave of appetite will ever be the disgrace of human nature.

The Author of Nature has endued us with various passions, for the propagation of the species, the preservation of the individual, &c. Intemperance is the abuse of these passions; and moderation consists in the proper regulation of them. Men, not contented with satisfying the simple calls of Nature, create artificial wants, and are perpetually in search after something that may gratify them; but imaginary wants can never be gratified. Nature is content with little; but luxury knows no bounds. Hence the epicure, the drunkard, and the debauchee, seldom stop in their career till their money or their constitution fails: then indeed they generally see their error when too late.

It is impossible to lay down fixed rules with regard to diet, on account of the different constitutions of mankind. The most ignorant person, however, certainly knows what is meant by excess; and it is in the power of every man, if he chooses, to avoid it.

The great rule of diet, is to study simplicity. Nature delights in the most plain and simple food, and every animal, except man, follows her dictates. Man alone riots at large, and ransacks the whole creation in quest of luxuries, to his own destruction. Addison, an elegant writer of the last age, speaks thus of intemperance in diet: "For my part, when I behold a fashionable table set out in all its "magnificence, I fancy that I see gouts and dropsies, fevers and le-"thargies, with other innumerable distempers, lying in ambuscade "among the dishes."

Nor is intemperance in other things less destructive than in diet. How quickly does the immoderate pursuit of carnal pleasures, or the abuse of intoxicating liquor, ruin the best constitution! Indeed these vices generally go hand in hand. Hence it is that we so often behold the votaries of Bacchus and Venus, even before they have arrived at the prime of life, worn out with diseases, and hastening with swift pace to an untimely grave. Did men reflect on the painful diseases and premature deaths which are daily occasioned by intemperance,

it would be sufficient to make them shrink back with horror from the indulgence even of their darling pleasures.

Intemperance does not hurt its votaries alone; the innocent too often feel the direful effects of it. How many wretched orphans are to be seen embracing dunghills, whose parents, regardless of the future, spent in riot and debauch what might have served to bring up their offspring in a decent manner! How often do we behold the miserable mother, with her helpless infants, pining in want, while the uel father is indulging his insatiate appetites!

Families are not only reduced to misery, but even extirpated, by intemperance. Nothing tends so much to prevent propagation and to shorten the lives of children, as the intemperance of parents. The poor man who labours all day, and at night lies down contented with his humble fare, can boast a numerous offspring; while his pampered lord, sunk in ease and luxury, often languishes without an heir to his ample fortunes. Even states and empires feel the influence of intemperance, and rise or fall as it prevails.

Instead of mentioning the different kinds of intemperance, and pointing out their influence upon health, we shall only, by way of example, make a few observations on one particular species of that vice, viz. the abuse of intoxicating liquors.

Every act of intoxication puts nature to the expence of a fever, in order to discharge the poisonous draught. When this is repeated almost every day, it is easy to foresee the consequences. The constitution must be strong indeed which is able long to hold out under a daily fever! but fevers occasioned by drinking do not always go off in a day; they frequently end in an inflammation of the breast, liver, or brain, and produce fatal effects.

Though the drunkard should not fall by an acute disease, he seldom escapes those of a chronic kind. Intoxicating liquors, when used to excess, weaken the bowels and spoil the digestion; they destroy the power of the nerves, and occasion paraletic and convulsive disorders: they likewise heat and inflame the blood, destroy its balsamic quality, render it unfit for circulation, and the nourishment of the body. Hence obstructions, atrophies, dropsies, and consumptions of the lungs. These are the common ways in which drunkards make their exit. Diseases of this kind, when brought on by hard drinking, seldom admit of a cure.

Many people injure their health by drinking, who seldom get drunk. The continual habit of soaking, as it is called, though its effects be not so violent, is not less pernicious. When the vessels are kept constantly full and upon the stretch, the different digestions can neither be duly performed, nor the humours properly prepared. Hence most people of this character are afflicted with the gout, the gravel, ulcerous sores in the legs, &c. If these disorders do not appear, they are seized with low spirits, hypochondriacal affections, and other symptoms of indigestion.

Consumptions are now so common, that it isthought one-tenth of the inhabitants of great towns die of that disease. Hard drinking is no doubt one of the causes to which we must impute the increase of

consumptions. The great quantities of viscid malt liquor drank by the common people of England, cannot fail to render their blood sizy and unfit for circulation; from whence proceed obstructions, and inflammations of the lungs. There are few great ale-drinkers who are not phthisical: nor is that to be wondered at, considering the glutinous and almost indigestable nature of strong ale.

Those who drink ardent spirits or strong wines run still greater hazard; these liquors heat and inflame the blood, and tear the tender vessels of the lungs to pieces; yet so great is the consumption of them in this country, that one would almost be induced to think that the inhabitants lived upon them.

The habit of drinking proceeds frequently from misfortunes in life. The miserable fly to it for relief. It affords them indeed a temporary ease. But, alas! this solace is short lived; and when it it is over, the spirits sink as much below their usual tone as they had before been raised above it. Hence a repetition of the dose becomes necessary, and every fresh dose makes way for another, till the unhappy wretch becomes a slave to the bottle, and at length falls a sacrifice to what at first, perhaps was taken only as a medicine. No man is so dejected as the drunkard when his debauch is gone off. Hence it is, that those who have the greatest flow of spirits while the glass circulates freely, are of all others the most melancholy when sober, and often put an end to their own miserable existence in a fit of spleen or ill humour.

Drunkenness not only proves destructive to health, but likewise to the faculties of the mind. It is strange that creatures who value themselves on account of a superior degree of reason to that of brutes, should take pleasure in sinking so far below them. Were such as voluntarily deprive themselves of the use of reason, to continue ever after in that condition, it would seem but a just punishment. Though this be not the consequence of one act of intoxication, it seldom fails to succeed a course of it. By a habit of drinking, the greatest genius is often reduced to a mere idiot.

It is amazing that our improvements in arts, learning, and politeness, have not put the barbarous custom of drinking to excess out of fashion. It is indeed less common in South Britain than it was formerly; but it still prevails very much in the North, where this relic of barbarity is mistaken for hospitality. There no man is supposed to entertain his guests well who does not make them drunk. Forcing people to drink is certainly the greatest piece of rudeness that any man can be quilty of. Manliness, complaisance, or mere good-nature, may induce a man to take his glass, if urged to it, at a time when he might as well take poison. The custom of drinking to excess has long been out of fashion in France; and as it begins to lose ground among the politer part of the English, we hope it will soon be banished from every part of this island.

Intoxication is peculiarly hurtful to young persons. It heats their blood, impairs their strength, and obstructs their growth; besides, the frequent use of strong liquors in the early part of life destroys any be-

nefit that might arise from them afterwards. Those who make a practice of drinking generous liquors when young, cannot expect to reap any benefit from them as a cordial in the decline of life.

Drunkenness is not only in itself a most abominable vice, but is an inducement to many others. There is hardly any crime so horrid that the drunkard will not perpetrate for the love of liquor. We have known mothers sell their children's clothes, the food that they should have eaten, and afterwards even the children themselves, in order to purchase the accursed draught.

CHAP. VIII.

OF CLEANLINESS.

THE want of cleanliness is a fault which admits of no excuse. Where water can be had for nothing, it is surely in the power of every person to be clean. The continual discharge from our bodies by perspiration renders frequent change of apparel necessary. Changing apparel greatly promotes the secretion from the skin, so necessary for health. When that matter which ought to be carried off by perspiration is either retained in the body, or reabsorbed from dirty clothes, it must occasion diseases.

Diseases of the skin are chiefly owing to want of cleanliness. They may indeed be caught by infection, or brought on by poor living, unwholesome food, &c. but they will seldom continue long where cleanliness prevails. To the same cause must we impute the various kinds of vermin which infest the human body, houses, &c. These may always be banished by cleanliness alone; and wherever they abound, we have reason to believe it is neglected.

Mr. Pott, in his Surgical Observations, mentions a disease which he calls the chimney sweeper's cancer, as it is almost peculiar to that unhappy set of people. This he justly attributes to neglect of cleanliness.

One common cause of putrid and malignant fevers is the want of cleanliness. These fevers commonly begin among the inhabitants of close dirty houses, who breath unwholesome air, take little exercise, and wear dirty clothes. There the infection is generally hatched, which often spreads far and wide, to the destruction of many. Hence cleanliness may be considered as an object of public attention. It is not sufficient that I am clean myself, while the want of it in my neighbour affects my health as well as his. If dirty people cannot be removed as a common nuisance, they ought at least to be avoided as infectious. All who regard their health should keep at a distance even from their habitations.

In places where great numbers of people are collected, cleanliness becomes of the utmost importance. It is well known that infectious diseases are communicated by tainted air: every thing, therefore, which tends to pollute the air, or spread the infection, ought with the

utmost care to be guarded against. For this reason, in great towns, no filth of any kind, should be permitted to lie upon the streets. Nothing is more apt to convey infection than the excrements of the diseased.

In many great towns the streets are little better than dunghills, being frequently covered with ashes, dung, and nastiness of every kind. Even slaughter-houses, or killing-shambles, are often to be seen in the very centre of great towns. The putrid blood, excrements, &c. with which these places are generally covered, cannot fail to taint the air, and render it unwholesome. How easily might this be prevented by active magistrates, who have it always in their power to make proper laws relative to things of this nature, and to enforce the observance of them!

We are sorry to say, that the importance of general cleanliness does not seem to be sufficiently understood by the magistrates of most great towns in Britain; though health, pleasure, and delicacy, all conspire to recommend an attention to it. Nothing can be more agreeable to the senses, more to the honour of the inhabitants, or more conducive to their health, than a clear town; nor can any thing impress a stranger with a more disrespectful idea of any people than its opposite. Whatever pretensions people may make to learning, politeness, or civilization, we will venture to affirm, that while they neglect cleanliness, they are in a state of barbarity.

The peasants in most countries seem to hold cleanliness in a sort of contempt. Were it not for the open situation of their houses, they would often feel the bad effects of this disposition. One seldom sees a farm house without a dunghill before the door, and frequently the cattle and their masters lodge under the same roof. Peasants are likewise extremely careless with respect to the change of apparel, keeping their houses, &c. clean. This is merely the effect of indolence and a dirty disposition. Habit may indeed render it less disagreeable to them, but no habit can ever make it salutary to wear dirty clothes or breath unwholesome air.

In camps the strictest regard should be paid to cleanliness. By negligence in this matter, infectious diseases are often spread amongst a whole army; and frequently more die of these than by the sword. The Jews during their encampments in the wilderness, received particular instructions (Deut. xxii.) with respect to cleanliness. The rules enjoined them ought to be observed by all in the like situation. Indeed the whole system of laws delivered to that people has a manifest tendency to promote cleanliness. Whoever considers the nature of their climate, the diseases to which they are liable, and their dirty disposition, will see the propriety of such laws.

It is remarkable that, in most eastern countries, cleanliness makes a great part of their religion. The Mahometan as well as the Jewish religion enjoins various bathings, washings, and purifications. No doubt these wer edesigned to represent inward purity; but they were at the same time calculated for the preservation of health. However whimsical these washings may appear to some, few things would tend more to prevent diseases than a proper attention to many of them.

Were every person, for example, after visiting the sick, handling a dead body, or touching any thing that might convey infection, to wash before he went into compony, or sat down to meat, he would run less hazard either of catching the infection himself, or of communicating it to others.

Frequent washing not only removes the filth and sordes which adhere to the skin, but likewise promotes the perspiration, braces the body, and enlivens the spirits. How refreshed, how cheerful, and agreeable, does one feel on being shaved, washed, and shifted; especially when these offices have been neglected longer than usual!

The eastern custom of washing the feet, though less necessary in this country, is nevertheless a very agreeable piece of cleanliness, and contributes greatly to the preservation of health. The sweat and dirt with which these parts are frequently covered, cannot fail to obstruct the perspiration. This piece of cleanliness would often prevent colds and fevers. Were people careful to bathe their feet and legs in lukewarm water at night, after being exposed to cold or wet through the day, they would seldom experience the ill effects which often proceed from these causes.

A proper attention to cleanlines is no where more necessary than on shipboard. If epidemical distempers break out there, no one can be safe. The best way to prevent them, is to take care that the whole company be cleanly in their clothes, bedding, &c. When infectious diseases do break out, cleanliness is the most likely means to prevent their spreading; it is likewise necessary to prevent their returning afterwards, or being conveyed to other places. For this purpose, the clothes, bedding, &c. of the sick ought to be carefully washed and fumigated with brimstone. Infection will lodge a long time in dirty clothes, and afterwards break out in the most terrible manner.

In places where great numbers of sick people are collected together, cleanliness ought to be most religiously observed. The very smell in such places is often sufficient to make one sick. It is easy to imagine what effect that is likely to have upon the diseased. In an hospital or infirmary, where cleanliness is neglected, a person in perfect health has a greater chance to become sick, than a sick person has to get well.

Few things are more unaccountable than that neglect, or rather dread of cleanliness, which appears among those who have the care of the sick; they think it almost criminal to suffer any thing that is clean to come near a person in a fever, for example, and would rather allow him to wallow in all manner of filth, than change the least bit of his linen. If cleanliness be necessary for persons in health, it is certainly more so for the sick. Many persons may be cured by cleanliness alone; most of them might be mitigated by it; and where it is neglected, the slightest disorders are often changed into the most malignant. The same mistaken care which prompted people to prevent the least admission of fresh air to the sick, seems to have induced them to keep them dirty. Both these destructive prejudices will, we hope, be soon entirly exploded.

Cleanliness is certainly agreeable to our nature. We cannot help approving it in others, even though we should not practice it ourselves.

It sooner attracts our regard than even finery itself, and often gains esteem where that fails. It is an ornament to the highest as well as the lowest station, and cannot be dispensed with in either. Few virtues are of more importance to society than general cleanliness. It ought to be carefully culrivated every where; but in populous cities it should be almost revered.

As it is impossible to be thoroughly clean without a sufficient quantity of water, we should earnestly recommend it to the magistrates of great towns to be particularly attentive to this article. Most great towns in Britain are so situated as to be easily supplied with water; and those persons who will not make a proper use of it, after it is brought to their hand, certainly deserve to be severely punished. The streets of great towns where water can be had, ought to be washed every day. This is the only effectual method for keeping them thoroughly clean; and, upon trial, we are persuaded it will be found the cheapest.

Some of the most dreadful diseases incident to human nature might, in my opinion, be entirely eradicated by cleanliness.

CHAP. IX.

OF INFECTION.

MANY diseases are infectious. Every person ought therefore, as far as he can, to avoid all communication with the diseased. The common practice of visiting the sick, though often well meant, has many ill consequences. Far be it from me to discourage any act of charity or benevolence, especially towards those in distress; but I cannot help blaming such as endanger their own or their neighbour's lives, by a mistaken friendship or an impertinent curiosity.

The houses of the sick, especially in the country, are generally crowded from morning till night with idle visitors. It is customary, in such places, for servants and young people to wait upon the sick by turns, and even to sit up with them all night. It would be a miracle indeed should such always escape. Experience teaches us the danger of this conduct. People often catch fevers in this way, and communicate them to others, till at length they become epidemic.

It would be thought highly improper for one who had not had the small pox to wait on a patient in that disease; yet many other fevers are almost as infectious as the small pox, and not less fatal. Some imagine that fevers prove more fatal in villages than in great towns for want of proper medical assistance. This may sometimes be the case; but I am inclined to think it oftener proceeds from the cause above mentioned.

Were a plan to be laid down for communicating infection, it could not be done more effectually than by the common method of visiting the sick. Such visitors not only endanger themselves and their connections, but likewise hurt the sick. By crowding the house, they render the air unwholesome, and by their private whispers and dis-

mal countenances disturb the imagination of the patient, and depress his spirits. Persons who are ill, especially in fevers, ought to be kept as quiet as possible. The sight of strange faces, and every thing that disturbs the mind, hurts them.

The common practice in country places of inviting great numbers of people to funerals, and crowding them into the same apartment where the corpse lies, is another way of spreading infection. The infection does not always die with the patient. Every thing that comes into contact with his body while alive, receives the contagion, and some of them, as clothes, blankets, &c. will retain it for a long time. Persons who die of infectious disorders ought not to lie long unburied; and people should keep as much as possible at a distance from them.

It would tend greatly to prevent the spreading of infectious diseases, if those in health were kept at a proper distance from the sick, The Jewish Legislator, among many other wise institutions for preserving health, has been peculiarly attentive to the means of preventing infection, or *defilement* as it is called, either from a diseased person or a dead body. In many cases the diseased were to be separated from those in health; and it was deemed a crime even to approah their habitations. If a person only touched a diseased or dead body, he was appointed to wash himself in water, and to keep for some time at a distance from society.

Infectious diseases are often communicated by clothes. It is extremely dangerons to wear apparel which has been worn by the deceased, unless it has been well washed and fumigated, as infection may lodge a long time in it, and afterwards produce very tragical effects. This shews the danger of buying at random the clothes which have been worn by other people.

Infectious disorders are frequently imported. Commerce, together with the riches of foreign climes, bring on also their diseases. These do often more than counterbalance all the advantages of that trade by means of which they are introduced. It is to be regretted that so little care is commonly bestowed, either to prevent the introduction or spreading of infectious maladies. Some attention, indeed, is generally paid to the plague; but other diseases pass unregarded.

Were the tenth part of the care taken to prevent the importation of diseases, that there is to prevent smuggling, it would be attended with many happy consequences. This might easily be done by appointing a physician at every considerable sea-port, to inspect the ship's company, passengers, &c. before they came ashore; and if any fever or other infectious disorder prevailed, to order the ship to perform a short quarantine, and to send the sick to some hospital or proper place to be cured. He might likewise order all the clothes, bedding, &c. which had been used by the sick during the voyage, to be either destroyed, or thoroughly cleansed by fumigation, &c. before any of them were sent ashore. A scheme of this kind if properly conducted, would prevent many fevers, and other infectious diseases, from being brought by sailors into sea-port towns, and by this means diffused all over the country.

Infection is often spread through cities by gaols, hospitals, &c. These are frequently situated in the very middle of populous towns; and when infectious diseases break out in them, it is impossible for the inhabitants to escape. Did magistrates pay any regard to the health of the people, this evil might be easily remedied.

Many are the causes which tend to diffuse infection through populou cities. The whole atmosphere of a large town is one contaminated mass, abounding with various kinds of infection, and must be pernicious to health. The best advice that we can give to such as are obliged to live in large cities, is to chuse an open situation; to avoid narrow, dirty, crowded streets; to keep their own house and offices clean; and to be as much abroad in the open air as their time will permit.

It would tend greatly to prevent the spreading of infectious diseases, were proper nurses every where employed to take care of the sick. This might often save a family, or even a whole town, from being infected by one person. We do not mean that people should abandon their friends or relations in distress, but only to put them on their guard against being too much in company with those who are afflicted with diseases of an infectious nature.

Such as wait upon the sick in infectious diseases run very great hazard. They should stuff their noses with tobacco, or some other strong smelling herb, as rue, tansy, or the like. They ought likewise to keep the patient very clean; to sprinkle the room where he lies with vinegar, or other strong acids; frequently to admit a stream of fresh air into it, and to avoid the smell of his breath as much as they can. They ought never to go into company without having changed their clothes and washed their hands; otherwise, if the disease be infectious, they will in all probability carry the contagion along with them.

There is reason to believe that infection is often conveyed from one place to another by the carelessness of the faculty themselves. Many physicians affect a familiar way of sitting upon the patient's bedside, and holding his arm for a considerable time. If the patient has the small pox, or any other infectious disease, there is no doubt but the doctor's hands, clothes, &c. will carry away some of the infection; and if he goes directly to visit another patient without washing his hands, changing his clothes, or being exposed to the open air, which is not seldom the case, is it any wonder that he should carry the disease along with him? Physicians not only endanger others, but also themselves, by this practice. And indeed they sometimes suffer for want of care.

However trifling it may appear to inconsiderate persons, we will venture to affirm, that a due attention to those things which tend to diffuse infection would be of great importance in preventing diseases. As most diseases are in some degree infectious, no one should continue long with the sick, except the necessary attendants. I mean not, however, by this caution, to deter those whose duty or office leads them to wait upon the sick from such a laudable and necessary employment.

Many things are in the power of the magistrates which would tend to prevent the spreading of infection; as the promoting of public cleanliness; removing gaols, hospitals, burying grounds, and other places where infection may be generated, at a proper distance from great towns; widening the streets, pulling down useless walls, and taking all methods to promote a free circulation of air through every part of the town, &c. Public hospitals, or proper places of reception for the sick, provided they were kept clean, well ventilated, and placed in an open situation, would likewise tend to prevent the spreading of infection. Such places of reception would prevent the poor, when sick, from being visited by their idle or officious neighbours. They would likewise render it unnecessary for sick servants to be kept in their master's houses. Masters had better pay for having their servants taken care of in an hospital, than run the hazard of having an infectious disease diffused among a numerous family. Sick servants and poor people, when placed in hospitals, are not only less apt to diffuse infection among their neighbours, but have likewise the advantage of being well attended.

We are not, however, to learn that hospitals, instead of preventing infection, may become the means of diffusing it. When they are placed in the middle of great towns; when numbers of patients are crowded togethe rin small apartments; when there is a constant communication kept up between the citizens and the patients; and when cleanliness and ventilation are neglected, they become nests for hatching diseases, and every one who goes into them not only runs a risk of receiving infection himself, but likewise of communicating it to others. This however is not the fault of the hospitals, but of those who have the management of them. It were to be wished, that they were both more numerous, and upon a more respectable footing, as that would induce people to go into them with more reluctance. This is the more to be desired, because most of the putrid fevers and other infectious disorders break out among the poor, and are by them communicated to the better sort. Were proper attention paid to the first appearances of such disorders, and the patients early conveyed to an hospital, we should seldom see a putrid fever, which is almost as infectious as the plague, become epidemic.

To purify hospitals, ships, houses, or apartments infected with contagion, immerse a tea-cup into a pipkin of heated sand; put into the tea-cup half an ounce of concentrated vitriolic acid (oil of vitriol) gently heated, and half an ounce of purified nitre in powder: stir them together with a glass spatula until a considerable degree of vapour arises. It may be left standing some time, or carried about in the hands of the operator, to render the fumes more generally diffusive. Or put three or four handfulls of common salt into a plate or pipkin, and pour on it a little nitrous acid *(aqua fortis)* from time to time, till you think the premises are sufficiently fumigated.

CHAP. X.

OF THE PASSIONS.

THE passions have great influence both in the cause and cure of diseases. How the mind affects the body will in all probability ever remain a secret. It is sufficient for us to know, that there is established a reciprocal influence between the mental and corporeal parts, and that whatever injures the one disorders the other.

OF ANGER.

The passion of *anger*, ruffles the mind, distorts the countenance, hurries on the circulation of the blood, and disorders the whole vital and animal functions. It often occasions fevers, and other acute diseases; and sometimes even sudden death. This passion is peculiarly hurtful to the delicate, and those of weak nerves. I have known such persons frequently lose their lives by a violent fit of anger, and would advise them to guard against the excess of this passion with the utmost care.

It is not indeed always in our power to prevent being angry; but we may surely avoid harbouring resentment in our breast. Resentment preys upon the mind, and occasions the most obstinate chronical disorders, which gradually waste the constitution. Nothing shews true greatness of mind more than to forgive injuries; it promotes the peace of society, and greatly conduces to our own ease, health and felicity.

Such as value health should avoid violent gusts of anger, as they would the most deadly poison. Neither ought they to indulge resentment, but to endeavour at all times to keep their minds calm and serene. Nothing tends so much to the health of the body, as a constant tranquility of the mind.

OF FEAR.

The influence of *fear*, both in occasioning and aggravating diseases, is very great. No man ought to be blamed for a decent concern about life; but too great a desire to preserve it is often the cause of losing it. Fear and anxiety, by depressing the spirits, not only dispose us to diseases, but often render those diseases fatal which an undaunted mind would overcome.

Sudden fear has generally violent effects. Epileptic fits, and other convulsive disorders, are often occasioned by it. Hence the danger of that practice, so common among young people, of frightening one another. Many have lost their lives, and others have been rendered miserable, by frolics of this kind. It is dangerous to tamper with the human passions. The mind may easily be thrown into such disorders as never again to act with regularity.

But the gradual effects of fear prove most hurtful. The constant dread of some future evil, by dwelling upon the mind, often occasions the very evil itself. Hence it comes to pass, that so many die of those very diseases of which they long had a dread, or which had

been impressed on their minds by some accident, or foolish prediction. This, for example, is often the case with women in child-bed. Many of those who die in that situation are impressed with the notion of their death a long time before it happens; and there is reason to believe that this impression is often the cause of it.

The methods taken to impress the minds of women with the apprehensions of the great *pain* and *peril* of child-birth are very hurtful. Few women die in labour, though many lose their lives after it; which may be thus accounted for. A woman after delivery, finding herself weak and exhausted, immediately apprehends she is in danger; but this fear seldom fails to obstruct the necessary evacuations, upon which her recovery depends. Thus the sex often fall a sacrifice to their own imaginations, when there would be no danger, did they apprehend none.

It seldom happens that two or three women in a great town die in child-bed, but their death is followed by many others. Every woman of their acquaintance who is with child dreads the same fate, and the disease becomes epidemical by the mere force of imagination. This should induce pregnant women to despise fear, and by all means to avoid those tattling gossips who are continually buzzing in their ears the misfortunes of others. Every thing that may in the least alarm a pregnant or child-bed woman, ought with the greatest care to be guarded against.

Many women have lost their lives in child-bed by the old superstitious custom, still kept up in most parts of Britain, of tolling the parish bell for every person who dies. People who think themselves in danger are very inquisitive; and if they come to know that the bell tolls for one who died in the same situation with themselves, what must be the consequence? At any rate they are apt to suppose that this is the case, and it will often be found a very difficult matter to persuade them to the contrary.

But this custom is not pernicious to child-bed women only. It is hurtful in many other cases. When low fevers, in which it is difficult to support the patient's spirits, prevail, what must be the effect of a funeral peal sounding five or six times a day in his ears? No doubt his imagination may suggest that others died of the same disease under which he labours. This apprehension will have a greater tendency to depress his spirits, than all the cordials of which medicine can boast will have to raise them.

If this useless piece of ceremony cannot be abolished, we ought to keep the sick as much from hearing it as possible, and from every other thing that may tend to alarm them. So far however is this from being generally attended to, that many make it their business to visit the sick, on purpose to whisper dismal stories in their ears. Such may pass for sympathizing friends, but they ought rather to be considered as enemies. All who wish well to the sick ought to keep such persons at the greatest distance from them.

A custom has long prevailed among physicians of prognosticating, as they call it, the patient's fate, or foretelling the issue of the disease. Vanity no doubt introduced this practice, and still suports

it, in spite of common sense, and the safety of mankind. I have known a physician barbarous enough to boast, that he pronounced more *sentences* than all his Majesty's judges. Would to God that such sentences were not often equally fatal! It may indeed be alleged, that the doctor does not declare his opinion before the patient. So much the worse. A sensible patient had better hear what the doctor says, than learn it from the disconsolate looks, the watery eyes, and the broken whispers of those about him. It seldom happens, when the doctor gives an unfavourable opinion, that it can be concealed from the patient. The very embarrassment which the friends and attendants shew in disguising what he has said, is generally sufficient to discover the truth.

We do not see what right any man has to announce the death of another, especially if such a declaration has a chance to kill him. Mankind are indeed very fond of prying into future events, and seldom fail to solicit the physician for his opinion. A doubtful answer, however, or one that may tend rather to encourage the hopes of the sick, is surely the most proper. This conduct could neither hurt the patient nor the physician. Nothing tends more to destroy the credit of physic than those bold prognosticators, who, by the bye, are generally the most ignorant of the faculty. The mistakes which daily happen in this way are so many standing proofs of human vanity and the weakness of science.

We readily admit, that there are cases where the physician ought to give intimation of the patient's danger to some of his near connexions; though even this ought always to be done with the greatest caution: but it never can be necessary in any case that the whole town and country should know, immediately after the doctor has made his first visit, *that he has no hopes of his patient's recovery.* Persons whose impertinent curiosity leads them to question the physician, with regard to the fate of his patient, certainly deserves no other than an evasive answer.

The vanity of foretelling the fate of the sick is not peculiar to the faculty. Others follow their example, and those who think themselves wiser than their neighbours often do much hurt in this way. Humanity surely calls upon every one to comfort the sick, and not to add to their affliction by alarming their fears. A friend, or even a physician may often do more good by a mild and sympathizing behaviour than by medicine, and should never neglect to administer that greatest of all cordials, HOPE.

OF GRIEF.

Grief is the most destructive of all the passions. Its effects are permanent; and when it sinks deep into the mind, it generally proves fatal. Anger and fear, being of a more violent nature, seldom last long; but grief often changes into a fixed melancholy, which preys upon the spirits, and wastes the constitution. This passion ought not to be indulged. It may generally be conquered at the beginning; but when it has gained strength, all attempts to remove it are vain.

No person can prevent misfortunes in life; but it shews true great-

ness of mind to bear them with serenity. Many persons make a merit of indulging grief, and, when misfortunes happen, they obstinately refuse all consolation, till the mind, overwhelmed with melancholy, sinks under the load. Such conduct is not only destructive to health, but inconsistent with reason, religion, and common sense.

Change of ideas is as necessary for health as change of posture. When the mind dwells long upon one subject, especially of a disagreeable nature, it hurts the whole functions of the body. Hence grief indulged spoils the digestion and destroys the appetite; by which means the spirits are depressed, the nerves relaxed, the bowels inflated with wind, and the humours, for want of fresh supplies of chyle, vitiated. Thus many an excellent constitution has been ruined by a family misfortune, or any thing that occasions excessive grief.

It is utterly impossible that any person of a dejected mind should enjoy health. Life may indeed be dragged out for a few years; but whoever would live to a good old age, must be good humoured and cheerful. This indeed is not altogether in our own power; yet our temper of mind, as well as our actions, depend greatly upon ourselves. We can either associate with cheerful or melancholy companions, mingle in the amusements and offices of life, or sit still and brood over our calamities as we choose; these and many such things are certainly in our power, and from these the mind generally takes its cast.

The variety of scenes which present themselves to the senses were certainly designed to prevent our attention from being too long fixed upon any one object. Nature abounds with variety, and the mind, unless fixed down by habit, delights in contemplating new objects. This at once points out the method of relieving the mind in distress. Turn the attention frequently to new objects. Examine them for some time. When the mind begins to recoil, shift the scene. By this means a constant succession of new ideas may be kept up, till the disagreeable ones entirely disappear. Thus travelling, the study of any art or science, reading, or writing, on such subjects as deeply engage the attention, will sooner expel grief than the most sprightly amusements.

It has already been observed, that the body cannot be healthy unless it be exercised; neither can the mind. Indolence nourishes grief. When the mind has nothing else to think of but calamities, no wonder that it dwells there. Few people who pursue business with attention are hurt by grief. Instead therefore of abstracting ourselves from the world or business when misfortunes happen, we ought to engage it with more than usual attention, to discharge with double diligence the functions of our station, and to mix with friends of a cheerful and social temper.

Innocent amusements are by no means to be neglected. These, by leading the mind insensibly to the contemplation of agreeable objects, help to dispel the gloom which misfortunes cast over it. They make time seem less tedious, and have many other happy effects.

Many persons, when overwhelmed with grief, betake themselves

to drinking. This is making the cure worse than the disease. It seldom fails to end in the ruin of fortune, character, and constitution.

OF LOVE.

Love is perhaps the strongest of all the passions; at least, when it becomes violent, it is less subject to the controul either of the understanding or will than any of the rest. Fear, anger, and several other passions, are necessary for the preservation of the individual, but love is necessary for the continuation of the species itself: it was therefore proper that this passion should be deeply rooted in the human breast.

Though love be a strong passion, it is seldom so rapid in its progress as several of the others. Few persons fall desperately in love all at once. We would therefore advise every one, before he tampers with this passion, to consider well the propriety of his being able to obtain the object of his wishes. When that is not likely, he should avoid every occasion of increasing it. He ought immediately to flee the company of the beloved object; to apply his mind attentively to business or study; to take every kind of amusement; and, above all, to endeavour, if possible, to find another object which may engage his affections, and which it may be in his power to obtain.

Some men make love for amusement, others from mere vanity, or on purpose to shew their consequence with the fair. Hence the too credulous fair are often betrayed into a situation which is truely deplorable. And the conduct of parents with regard to the disposal of their children in marriage is often very blameable. An advantageous match is the constant aim of parents; while their children often suffer a real martyrdom betwixt their inclinations and duty. The first thing which parents ought to consult in disposing of their children in marriage, is certainly their inclinations. Were due regard always paid to these, there would be fewer unhappy couples, and parents would not have so often cause to repent the severity of their conduct, after a ruined constitution, a lost character, or a distracted mind, have shewn them their mistake.

OF RELIGIOUS MELANCHOLY.

Many persons of a religious turn of mind behave as if they thought it a crime to be cheerful. They imagine the whole of religion consists in certain mortifications, or denying themselves the smallest indulgence, even of the most innocent amusements. A perpetual gloom hangs over their countenances, while the deepest melancholy pre upon their minds. At length the fairest prospects vanish, every thing puts on a dismal appearance, and those very objects which ought to give delight afford nothing but disgust. Life itself becomes a burden, and the unhappy wretch, persuaded that no evil can equal what he feels, often puts an end to his miserable existence.

It is a great pity that ever religion should be so far perverted, as to become the cause of those very evils which it was designed to cure. Nothing can be better calculated than *True Religion* to raise and support the mind of its votaries under every affliction that can befal them. It teaches men that even the sufferings of this life are prepa-

ratory to the happiness of the next; and that all who persist in a course of virtue shall at length arrive at complete felicity.

Those whose business it is to recommend religion to others, should beware of dwelling too much on gloomy subjects. That peace and tranquility of mind which true religion is calculated to inspire, is a more powerful argument in its favour than all the terrors than can be uttered. Terror may indeed deter men from outward acts of wickedness, but can never inspire them with that love of God, and real goodness of heart, in which alone true religion consists.

To conclude; the best way to counteract the violence of any passion, is to keep the mind closely engaged in some useful pursuit.

CHAP. XI.

Of the COMMON EVACUATIONS.

THE principal evacuations from the human body are those by *stool, urine,* and *insensible perspiration.* None of these can be long obstructed without impairing the health. When that which ought to be thrown out of the body is too long retained, it not only occasions a *plethora,* or too great fulness of the vessels, but acquires qualities which are hurtful to the health, as acrimony, putrescence, &c.

OF THE EVACUATIONS BY STOOL.

Few things conduce more to health than keeping the body regular. When the *fæces* lie too long in the bowels, they vitiate the humours; and when they are too soon discharged, the body is not sufficiently nourished. A medium is therefore to be desired, which can only be obtained by regularity in diet, sleep, and exercise. Whenever the body is not regular, there is reason to suspect a fault in one or other of these.

Persons who eat and drink at irregular hours, and who eat various kinds of food, and drink of several different liquors at every meal, have no reason to expect either that their digestion will be good, or their discharges regular. Irregularity in eating and drinking disturbs every part of the animal œconomy, and never fails to occasion diseases. Either too much or too little food will have this effect. The former indeed generally occasions looseness, and the latter costiveness; but both have a tendency to hurt the health.

It would be difficult to ascertain the exact number of stools which may be consistent with health, as these differ in the different periods of life, in different constitutions, and even in the same constitution under a different regimen of diet. exercise, &c. It is however generally allowed, that one stool a day is sufficient for an adult, and that less is hurtful. But this like most general rules, admits of many exceptions. I have known persons in perfect health who did not go to stool above once a week; and some persons have told me that they did not go to stool above once a month. Such a degree of costiveness however is not safe; though the person who labours

under it may for some time enjoy tolerable health, yet at length it may occasion diseases.

One method of procuring a stool every day is to rise betimes, and go abroad in the open air. Not only the posture in bed is unfavourable to regular stools, but also the warmth. This, by promoting the perspiration, lessens all the other discharges.

The method recommended for this purpose by Mr. Locke is likewise very proper, viz. *to solicit nature, by going regularly to stool every morning whether one has a call or not.* Habits of this kind may be acquired, which will in time become natural.

Persons who have a frequent recourse to medicines for preventing costiveness seldom fail to ruin their constitution. Purging medicines frequently repeated weaken the bowels, hurt the digestion, and every dose makes way for another, till at length they become as necessary as daily bread. Those who are troubled with costiveness ought rather, if possible, to remove it by diet than by drugs. They should likewise go thinly clothed, and avoid every thing of an astringent or of an heating nature. The diet and other regimen necessary in this case will be found under the article *Costiveness*, where this state of the bowels is treated as a disease.

Such persons as are troubled with an habitual looseness ought likewise to suit their diet to the nature of their complaint. They should use food which braces and strengthens the bowels, and which is rather of an astringent quality, as wheat-bread made of the finest flour, cheese, eggs, rice boiled in milk &c. Their drink should be red port, claret, brandy and water in which toasted bread has been boiled, and such like.

As an habitual looseness is often owing to an obstructed perspiration, persons affected with it ought to keep their feet warm, to wear flannel next their skin, and take every other method to promote the perspiration. Further directions with regard to the treatment of this complaint will be found under the article *Looseness*.

OF URINE.

So many things tend to change both the quantity and appearances of the urine, that it is very difficult to lay down any determined rules for judging of either. Dr. Cheyne says, the urine ought to be equal to three fourths of the liquid part of our aliment. But suppose any one were to take the trouble of measuring both, he would find that every thing which altered the degree of perspiration, would altar this proportion, and likewise that different kinds of aliment would afford very different quantities of urine. Though for these and other reasons, no rule can be given for judging of the precise quantity of urine which ought to be discharged, yet a person of common sense will seldom be at a loss to know when it is in either extreme.

It has long been an observation among physicians, that the appearances of the urine are very uncertain, and very little to be depended on. No one will be surprized at this who considers how many ways it may be affected, and consequently have its appearance altered. The passions, the state of the atmosphere, the quantity and quality of the food, the exercise, the clothing, the state of the other

evacuations, and numberless other causes, are sufficient to induce a change either in the quantity or appearance of the urine. Any one who attends to this will be astonished at the impudence of those daring quacks, who pretend to find out diseases, and prescribe to patients from the bare inspection of their urine. These impostors, however, are very common all over Britain, and by the amazing credulity of the populace, many of them have amassed considerable fortunes.

As a free discharge of urine not only prevents but actually cures many diseases, it ought by all means to be promoted; and every thing that may obstruct it should be carefully avoided. Both the secretion and discharge of urine are lessened by a sedentary life, sleeping on beds that are too soft and warm, food of a dry and heating quality, liquors which are astringent and heating, as red port, claret, and such like. Those who have reason to suspect that their urine is in too small quantity, or who have any symptoms of the gravel, ought not only to avoid these things, but whatever else they find has a tendency to lessen the quantity of their urine.

When the urine is too long retained, it is not only resorbed, or taken up again into the mass of fluids, but by stagnating in the bladder it becomes thicker, the more watery parts flying off first, and the more gross and earthy remaining behind. By the constant tendency which these have to concrete, the formation of stones and gravel in the bladder is promoted. Hence it comes to pass that indolent and sedentary people are much more liable to these diseases, than persons of a more active life.

Many persons have lost their lives, and others have brought on very tedious and even incurable disorders by retaining their urine too long, from a false delicacy. When the bladder has been over-distended, it often loses its power of action altogether, or becomes paralytic, by which means it is rendered unable either to retain the urine, or expel it properly. The calls of nature ought never to be postponed. Delicacy is doubtless a virtue, but that never can be reckoned true delicacy which induces any one to risk his health or hazard his life.

But the urine may be in too great as well as too small a quantity. This may be occasioned by drinking large quantities of weak watery liquors, by the excessive use of alkaline salts, or any thing that stimulates the kidnies, dilutes the blood, &c. This disorder very soon weakens the body, and induces a consumption. It is difficult to cure, but may be mitigated by strengthening diet and astringent medicines, such as are recommended under the article *Diabetes*, or excessive discharge of urine.

OF THE PERSPIRATION.

Insensible perspiration is generally reckoned the greatest of all the discharges from the human body. It is of so great importance to health, that few diseases attack us while it goes properly on; but when it is obstructed, the whole frame is soon disordered. This discharge, however, being less perceptable than any of the rest, is consequently less attended to. Hence it is, that acute fevers, rheumatisms,

agues, &c. often proceed from obstructed perspiration before we are aware of its existence.

On examining patients, we find most of them impute their diseases either to violent colds which they had caught, or to slight ones which had been neglected. For this reason, instead of a critical enquiry into the nature of the perspiration, its difference in different seasons, climates, constitutions, &c. we shall endeavour to point out the causes which most commonly obstruct it, and to shew how far they may be either avoided, or have their influence counteracted by timely care. The want of due attention to these, costs Britain annually some thousands of useful lives. Warm clothing of sailors in cold climates is indispensibly necessary to preserve their health.

CHANGES IN THE ATMOSPHERE.

One of the most common causes of obstructed perspiration, or catching cold, in this country, is the changeableness of the weather, or state of the atmosphere. There is no place where such changes happen more frequently than in Great Britain. With us the degrees of heat and cold are not only very different in the different seasons of the year, but often change almost from one extreme to another in a few days, and sometimes even in the course of one day. That such changes must affect the state of the perspiration is obvious to every one.

The best method of fortifying the body against the changes of the weather, is to be abroad every day. Those who keep most within doors are most liable to catch cold. Such persons generally render themselves so delicate as to feel even the slightest changes in the atmosphere, and by their pains, coughs, oppressions of the breast, &c. they become a kind of living barometers.

WET CLOTHES.

Wet clothes not only by their coldness obstruct the perspiration, but their moisture, by being absorbed, or taken up into the body, greatly encreases the danger. The most robust constitution is not proof against the danger arising from wet clothes; they daily occasion fevers, rheumatisms, and other fatal disorders, even in the young and healthy.

It is impossible for people who go frequently abroad to avoid sometimes being wet. But the danger might generally be lessened, if not wholly prevented, by changing their clothes soon: when this cannot be done, they should keep in motion till they be dry. So far are many from taking this precaution, that they often sit or lie down in the fields with their clothes wet, and frequently sleep even whole nights in this condition. The frequent instances which we have of the fatal effects of this conduct, ought certainly to deter all from being guilty of it.

WET FEET.

Even wet feet often occasion fatal diseases. The cholic, inflammations of the breast and of the bowels, the iliac passion, *cholera morbus*, &c. are often occasioned by wet feet. Habit will, no doubt, ren-

der this less dangerous; but it ought, as far as possible, to be avoided. The delicate, and those who are not accustomed to have their clothes or feet wet, should be peculiarly careful in this respect.

NIGHT AIR.

The perspiration is often obstructed by night air; even in summer this ought to be avoided. The dews which fall plentifully after the hottest day, make the night more dangerous than when the weather is cool. Hence, in warm countries, the evening dews are more hurtful than where the climate is more temperate.

It is very agréeable after a warm day to be abroad in a cool evening; but this is a pleasure to be avoided by all who value their health. The effects of evening dews are gradual indeed, and almost imperceptible, but they are not the less to be dreaded: we would therefore advise travellers, labourers, and all who are much heated by day, carefully to avoid them. When the perspiration has been great, these become dangerous in proportion. By not attending to this, in flat marshy countries, where the exhalations and dews are copious, labourers are often seized with intermitting fevers, quinsies, and other dangerous maladies.

DAMP BEDS.

Beds become damp either from their not being used, standing in damp houses, or in rooms without fire, or from the linen not being dry when laid on the bed. Nothing is more to be dreaded by travellers than damp beds, which are very common in all places where fuel is scarce. When a traveller, cold and wet, arrives at an inn, he may, by means of a good fire, warm diluting liquor, and a dry bed, have the perspiration restored; but if he be put into a cold room, and laid in a damp bed, it will be more obstructed, and the worst consequences will ensue. Travellers should avoid inns which are noted for damp beds as they would a house infected with the plague; as no man, however robust, is proof against the danger arising from them.

But inns are not the only places where damp beds are to be met with. Beds kept in private families for the reception of strangers are often equally dangerous. All kinds of linen and bedding, when not frequently used, become damp. How then is it possible that beds which are not slept in above two or three times a year, should be safe? Nothing is more common than to hear people complain of having caught cold by changing their bed. The reason is obvious: were they careful never to sleep in a bed but what was frequently used, they would seldom find any ill consequences from a change.

Nothing is more to be dreaded by a delicate person when on a visit than being laid in a bed which is kept on purpose for strangers. That ill-judged piece of complaisance becomes a real injury. All the bad consequences from this quarter might easily be prevented in private families, by causing their servants to sleep in the spare beds, and resigning them to strangers when they come. In inns, where the beds are used almost every night, nothing else is necessary than to keep the rooms well seasoned by frequent fires, and the linen dry.

DAMP HOUSES.

Damp houses frequently produce the like ill consequences; for this reason, those who build should be careful to chuse a dry situation. A house which stands on a damp marshy soil or deep clay, will never be thoroughlydry. All houses, unless where the ground is exceedingly dry, should have the first floor a little raised. Servants and others, who are obliged to live in cellars and sunk stories, seldom continue long in health: masters ought surely to pay some regard to the health of their servants as well as to their own.

Nothing is more common than for people merely to avoid some trifling inconveniency, to hazard their lives, by inhabiting a house almost as soon as the masons, plaisterers, &c. have done with it; such houses are not only dangerous from their dampness, but likewise from the smell of the lime, paint, &c. The asthmas, consumptions, and other diseases of the lungs, so incident to people who work in these articles, are sufficient proofs of their being unwholesome.

Rooms are often rendered damp by an unseasonable piece of cleanliness; I mean the pernicious custom of washing them immediately before company is put into them. Most people catch cold if they sit but a very short time in a room that has been lately washed; the delicate ought carefully to avoid such a situation, and even the robust are not always proof against its baneful influence.

SUDDEN TRANSITIONS FROM HEAT TO COLD.

The perspiration is commonly obstructed by SUDDEN TRANSITIONS from heat to cold. Colds are seldom caught, unless when people have been too much heated. Heat rarifies the blood, quickens the circulation, and increases the perspiration; but when these are suddenly checked, the consequences must be bad. It is indeed impossible for labourers not to be too hot upon some occasions; but it is generally in their power to let themselves cool gradually, to put on their clothes when they leave off work, to make choice of a dry place to rest themselves in, and to avoid sleeping in the open fields. These easy rules, if observed, would save many useful lives.

It is very usual for people, when hot, to drink freely of cold water, or small liquors. This conduct is extremely dangerous. Thirst indeed is hard to bear, and the inclination to gratify that appetite frequently gets the better of reason, and makes us do what our judgment disapproves. Every peasant, however, knows if his horse be permitted to drink his bellyful of cold water after violent exercise, and be immediately put into the stable, or suffered to remain at rest, that it will kill him. This they take the utmost care to prevent. It were well if they were equally attentive to their own safety.

Thirst may be quenched many ways without swallowing large quantities of cold liquor. The fields afford variety of acid fruits and plants, the very chewing of which would abate thirst. Water kept in the mouth for some time, and spit out again, if frequently repeated, will have the same effect. If a bit of bread be eaten along with a few mouthfuls of water, it will both quench thirst more effectually, and make the danger less. When a person is extremely hot, a mouthful

of brandy, or other spirits, if it can be obtained, ought to be preferred to any thing else. But if any one has been so foolish, when hot, as to drink freely of cold liquor, he ought to continue his exercise at least till what he drank be thoroughly warmed upon his stomach.

It would be tedious to enumerate all the bad effects which flow from drinking cold liquors when the body is hot. Sometimes this has occasioned immediate death. Hoarseness, quinseys, and fevers of various kinds, are its common consequences. Neither is it safe when warm to eat freely of raw fruits, salads, or the like. These indeed have not so sudden an effect on the body as cold liquors, but they are notwithstandnig dangerous, and ought to be avoided.

Sitting in a warm room, and drinking hot liquors till the pores are quite open, and immediately going into the cold air, is extremely dangerous. Colds, coughs, and inflammations of the breast, are the usual effects of this conduct; yet nothing is more common than for people, after they have drank warm liquors for several hours, to walk or ride a number of miles in the coldest night, or to ramble about the streets.

People are very apt, when a room is hot, to throw open a window, and to sit near it. This is a most dangerous practice. Any person had better sit without doors than in such a situation, as the current of air is directed against one particular part of the body. Inflammatory fevers and consumptions have often been occasioned by sitting or standing thinly clothed near an open window. Nor is sleeping with open windows less to be dreaded. That ought never to be done, even in the hottest season, unless the window is at a distance. I have known mechanics frequently contract fatal diseases by working stript at an open window, and would advise all of them to beware of such a practice.

Few things expose people more to catch cold than keeping their own houses too warm; such persons may be said to live in a sort of hot-houses; they can hardly stir abroad to visit a neighbour but at the hazard of their lives. Were there no other reason for keeping houses moderately cool, that alone is sufficient; but no house that is too hot can be wholesome; heat destroys the spring and elasticity of the air, and renders it less fit for expanding the lungs, and the other purposes of respiration. Hence it is that consumptions and other diseases of the lungs prove so fatal to people who work in forges, glass-houses, and the like.

Some are even so fool-hardy, as to plunge themselves when hot in cold water. Not only fevers, but madness itself, has frequently been the effect of this conduct. Indeed it looks too like the action of a madman to deserve a serious consideration.

The result of all these observations is, that every one ought to avoid, with the utmost attention, all sudden transitions from heat to cold, and to keep the body in as uniform a temperature as possible; or where that cannot be done, to take care to let it cool gradually.

People may imagine that too strict an attention to these things would tend to render them delicate. So far however is this from being my design, that the very first rule proposed for preventing colds is to harden the body, by inuring it to the open air.

I shall conclude what relates to this part of my subject, by giving an abstract of the justly celebrated advice of Celsus, with respect to the preservation of health. "A man," says he, "who is blessed with good "health, should confine himself to no particular rules, either with "respect to regimen or medicine. He ought frequently to diversify "his manner of living; to be sometimes in town, sometimes in the "country; to hunt, sail, indulge himself in rest, but more frequently "to use exercise. He ought to refuse no kind of food that is com-"monly used, but sometimes to eat more and sometimes less; some-"times to make one at an entertainment, and sometimes to forbear it: "th make rather two meals a-day than one, and always to eat heartily. "provided he can digest it. He ought neither too eagerly to pursue "nor too scrupulously to avoid intercourse with the fair sex: pleasures "of this kind, rarely indulged, render the body alert and active; but "when too frequently repeated, weak and languid. He should be "careful in time of health not to destroy by excesses of any kind, "that vigour of constitution which should support him under sickness."

PART. II.

OF DISEASES.

CHAP. XII.

Of the Knowledge and Cure of Diseases.

IT is no doubt difficult to obtain such a knowledge of diseases as to distinguish them from one another. This, however, does not depend so much upon scientific principles as some imagine. It is chiefly the result of experience and observation. By attending the sick, and carefully observing the various occurrences in diseases, a great degree of accuracy may be acquired, both in distinguishing their symptoms, and in the application of medicines. Hence sensible nurses, and other persons who wait upon the sick, often foresee the patient's fate sooner than those who have been bred to physic. We do not, however, mean to insinuate that a medical education is of no use; it is doubtless of the greatest importance; but it never can supply the place of experience and observation.

Every disease may be considered as an assemblage of symptoms, and must be distinguished by those which are most obvious and permanent. Instead therefore of giving a classical arrangement of diseases, according to the systematic method, it will be more suitable, in a performance of this nature, to give a full and accurate description of each particular disease as it occurs; and where any of the symptoms of

one disease have a near resemblance to those of another, to take notice of that circumstance, and at the same time to point out the peculiar or characteristic symptoms by which it may be distinguished. By a due attention to these, the investigation of diseases will be found to be a less difficult matter than most people would at first be ready to believe.

A proper attention to the patient's age, sex, temper of mind, constitution, and manner of life, will likewise greatly assist, both in the investigation and treatment of diseases.

In childhood the fibres are lax and soft, the nerves extremely irritable, and the fluids thin; whereas in old age the fibres are rigid, the nerves become almost insensible, and many of the vessels imperviable. These and other peculiarities render the diseases of the young and aged very different, and of course they must require a different method of treatment.

Females are liable to many diseases which do not afflict the other sex: besides, the nervous system being more irritable in them than in men, their diseases require to be treated with greater caution. They are less able to bear large evacuations; and all stimulating medicines ought to be administered to them with a sparing hand.

Particular constitutions not only dispose persons to peculiar diseases, but likewise render it necessary to treat these diseases in a peculiar manner. A delicate person, for example, with weak nerves, who lives mostly within doors, must not be treated under any disease precisely in the same manner as one who is hardy and robust, and who is much exposed to the open air

The temper of mind ought to be carefully attended to in diseases. Fear, anxiety, and a fretful temper, both occasion and aggravate diseases. In vain do we apply medicines to the body to remove maladies which proceed from the mind. When it is affected, the best medicine is to soothe the passions, to divert the mind from anxious thought, and to keep the patient as easy and cheerful as possible.

Attention ought likewise to be paid to the climate, or place where the patient lives, the air he breathes, his diet, &c. Luch as live in low marshy situations are subject to many diseases which are unknown to the inhabitants of high countries. Those who breathe the impure air of cities, have many maladies to which the more happy rustics are entire strangers. Persons who feed grossly, and indulge in strong liquors, are liable to diseases which do not affect the temperate and abstemious.

It has already been observed, that the different occupations and situations in life dispose men to peculiar diseases. It is therefore necessary to inquire into the patient's occupation, manner of life, &c. This will not only assist us in finding out the disease, but will likewise direct us in the treatment of it. It would be very imprudent to treat the laborious and the sedentary precisely in the same manner, even supposing them labouring under the same disease.

It will likewise be proper to inquire whether the disease be constitutional or accidental; whether it has been of long or short duration; whether it proceeds from any great and sudden alteration in the diet,

manner of life, &c. The state of the patient's body, and of the other evacuations, ought also to be inquired into; and likewise whether he can with ease perform all the vital and animal functions, as breathing, digestion, &c.

Lastly, it will be proper to inquire what diseases the patient has formerly been liable to, and what medicines were most beneficial to him; if he has a strong aversion to any particular drug, &c.

As many of the indications of cure may be answered by diet alone, it is always the first thing to be attended to in the treatment of diseases. Those who know no better, imagine that every thing which goes by the name of a medicine possesses some wonderful power or secret charm, and think, if the patient swallows enough of drugs, that he must do well. This mistake has many ill consequences; it makes people trust to drugs, and neglect their own endeavours; besides, it discourages all attempts to relieve the sick where medicines cannot be procured.

Medicines are no doubt useful in their places; and when administered with prudence, they may do much good; but when they are put in place of every thing else, or administered at random, which is not seldom the case, they must do mischief. We would therefore wish to call the attention of mankind from the pursuit of secret medicines, to such things as they are acquainted with. The proper regulation of these may often do much good, and there is little danger of their ever doing hurt.

Every disease weakens the digestive powers. The diet ought therefore, in all diseases, to be light and easy of digestion. It would be as prudent for a person with a broken leg to attempt to walk, as for one in a fever to eat the same kind of food, and in the same quantity, as when he was in perfect health. Even abstinence alone will often cure a fever, especially when it has been occasioned by excess in eating or drinking.

In all fevers attended with inflammation, as pleurisies, peripneumonies, &c. thin gruels, wheys, watery infusions of mucilaginous plants, roots, &c. are not only proper for the patient's food, but they are likewise the best medicines which can be administered.

In fevers of a slow, nervous, or putrid kind, where there are no symptoms of inflammation, and where the patient must be supported with cordials, that intention can always be more effectually answered by nourishing diet and generous wines, than by any medicines yet known.

Nor is a proper attention to diet of less importance in chronic than in acute diseases. Persons afflicted with low spirits, wind, weak nerves, and other hypochondriacal affections, generally find more benefit from the use of solid food and generous liquors, than from all the cordial and carminative medicines which can be administered to them.

The scurvy, that most obstinate malady, will sooner yield to a proper vegetable diet, than to all the boasted antiscorbutic remedies of the shops.

In consumptions, when the humours are vitiated, and the stomach so much weakened as to be unable to digest the solid fibres of animals, or even to assimilate the juices of vegetables, a diet consisting chiefly of *milk* will not only support the patient, but will often cure the disease after every other medicine has failed.

Nor is an attention to other things of less importance than to diet. The strange infatuation which has long induced people to shut up the sick from all communication with the external air has done great mischief. Not only in fevers, but in many other diseases, the patient will receive more benefit from having the fresh air prudently admitted into his chamber, than from all the medicines which can be given him.

Exercise may likewise in many cases be considered as a medicine. Sailing, or riding on horseback, for example, will be of more service in the cure of consumptions, glandular obstructions, &c. than any medicine yet known. In diseases which proceed from a relaxed state of the solids, the cold bath, and other parts of the gymnastic regimen, will be found equally beneficial.

Few things are of greater importance in the cure of diseases than cleanliness. When a patient is suffered to lie in his dirty clothes, whatever perspires from his body is again resorbed, or taken up into it, which serves to nourish the disease and increase the danger. Many diseases may be cured by cleanliness alone; most of them may be mitigated by it, and in all of them it is highly necessary both for the patient and those who attend him.

Many other observations, were it necessary, might be adduced to prove the importance of a proper regimen in diseases. Regimen will often cure diseases without medicine, but medicine will seldom succeed where a proper regimen is neglected. For this reason, in the treatment of diseases, we have always given the first place to regimen. Those who are ignorant of medicine may confine themselves to it only. For others who have more knowledge, we have recommended some of the most simple but approved forms of medicine in every disease. These however are never to be administered but by people of better understanding; nor even by them without a reasonable degree of precaution.

CHAP. XIII.

OF FEVERS IN GENERAL.

AS more than one half of mankind is said to perish by fevers, it is of importance to be acquainted with their causes. The most general causes of fevers are, *infection, errors in diet, unwholesome air, violent emotions of the mind, excess or suppression of usual evacuations, external or internal injuries, and extreme degrees of heat or cold.* As most of these have already been treated of at considerable length, and their effects shewn, we shall now resume the consideration of them, but shall only recommend it to all, as they

would wish to avoid fevers and other fatal diseases, to pay the most punctual attention to these articles.

Fevers are not only the most frequent of all diseases, but they are likewise the most complex. In the most simple species of fever there is always a combination of several different symptoms. The distinguishing symptoms of fever are, *increased heat, frequency of pulse, loss of appetite, general debility, pain in the head,* and *a difficulty in performing some of the vital or animal functions.* The other symptoms usually attendant on fevers are, nausea, thirst, anxiety, delirium, weariness, wasting of the flesh, want of sleep, or the sleep disturbed, and not refreshing.

When the fever comes on gradually, the patient generally complains first of languor or listlessness, soreness of the flesh, or the bones, as the country people express it, heaviness of the head, loss of appetite, sickness, with clamminess of the mouth; afer some time come on excessive heat, violent thirst, restlessness, &c.

When the fever attacks suddenly, it always begins with an uneasy sensation of excessive cold, accompanied with debility and loss of appetite; frequently the cold is attended with shivering, oppression about the heart, and sickness at the stomach, or vomiting.

Fevers are divided into continual, remitting, intermitting, and such as are attended with cutaneous eruptions or topical inflammation, as the small-pox, erysipelas, &c. By a continual fever is meant that which never leaves the patient during the whole course of the disease, or which shews no remarkable increase or abatement in the symptoms. This kind of fever is likewise divided into acute, slow, and malignant. The fever is called *acute* when its progress is quick, and the symptoms violent; but when these are more gentle, it is generally denominated *slow.* When livid or petechial spots shew a putrid state of the humours, the fever is called *malignant, putrid,* or *petechial.*

A remitting fever differs from a continual only in a degree. It has frequent increases and decreases, or exacerbations and remissions, but never wholly leaves the patient during the course of the disease. Intermitting fevers or agues are those which, during the time that the patient may be said to be ill, have evident intervals or remissions of the symptoms.

As a fever is only an effort of Nature to free herself from an offending cause, it is the business of those who have the care of the sick to assist her operations. Our bodies are so framed, as to have a constant tendency to expel or throw off whatever is injurious to health. This is generally done by urine, sweat, stool, expectoration, vomit, or some other evacuation.

There is reason to believe, if the efforts of Nature, at the beginning of a fever, were duly attended to and promoted, it would seldom continue long; but when her attempts are either neglected or counteracted, it is no wonder if the disease proves fatal. There are daily instances of perons who, after catching cold, have all the symptoms of a beginning fever; but by keeping warm, drinking diluting liquors

bathing their feet in warm water, &c. the symptoms in a few hours disappear, and the danger is prevented. When fevers of a putrid kind threaten, the best method of obviating their effects is by repeated vomits.

Our design is not to enter into a critical enquiry into the nature and immediate causes of fevers, but to mark their most obvious symptoms, and to point out the proper treatment of the patient with respect to his diet, drink, air, &c. in the different stages of the disease. In these articles, the inclinations of the patient will in a great measure direct our conduct.

Almost every person in a fever complains of great thirst, and calls out for drink, especially of a cooling nature. This at once points out the use of *water*, and other cooling liquors. What is so likely to abate the heat, attenuate the humours, remove spasms and obstructions, promote perspiration, increase the quantity of urine, and in short produce every salutary effect in an ardent or inflammatory fever, as drinking plentifully of water, thin gruel, or any other weak liquor, of which water is the basis? The necessity of diluting liquors is pointed out by the dry tongue, the parched skin, and the burning heat, as well as by the unquenchable thirst of the patient.

Many cooling liquors, which are extremely grateful to patients in a fever, may be prepared from fruits, as decoctions of tamarinds, apple tea, orange whey, and the like. Mucilaginous liquors might also be prepared from marsh-mallow-roots, especially when acidulated, which are highly agreeable to the patient, and should never be denied him.

At the beginning of a fever the patient generally complains of great lassitude or weariness, and has no inclination to move. This evidently shews the propriety of keeping him easy, and if possible in bed. Lying in bed relaxes the spasms, abates the violence of the circulation, and gives Nature an opportunity of exerting all her force to overcome the disease. The bed alone would often remove a fever at the beginning; but when the patient struggles with the disease, instead of driving it off, he only fixes it the deeper, and renders it more dangerous. This observation is too often verified in travellers, who happen when on a journey to be seized with a fever. Their anxiety to get home induces them to travel with the fever upon them, which conduct seldom fails to render it fatal.

In fevers the mind as well as as the body should be kept easy. Company is seldom agreeable to the sick. Indeed every thing that disturbs the imagination increases the disease; for which reason every person in a fever ought to be kept perfectly quiet, and neither allowed to see nor hear any thing that may in the least affect or discompose his mind.

Though the patient in a fever has the greatest inclination for drink, yet he seldom has any appetite for solid food; hence the impropriety of urging him to take victuals is evident. Much solid food in a fever is every way hurtful. It oppresses nature, and instead of nourishing the patient, serves only to feed the disease. What food the patient takes should be in small quantity, light, and of easy di-

gestion. It ought to be chiefly of the vegetable kind, as panada, roasted apples, gruels, and such like.

Poor people, when any of their family are taken ill, run directly to their rich neighbour for cordials, and pour wine, spirits, &c. into the patient, who perhaps never had been accustomed to take such liquors when in health. If there be any degree of fever, this conduct must increase it; and if there be none, this is the ready way to raise one. Stuffing the patient with sweatmeats and other delicacies is likewise very pernicious. These are always harder to digest than common food, and cannot fail to prove injurious.

Nothing is more desired by a patient in a fever than fresh air. It not only removes his anxiety, but cools the blood, revives the spirits, and proves every way beneficial. Many patients are in a manner stifled to death in fevers for want of fresh air; but such is the unaccountable infatuation of most people, that the moment they think a person in a fever, they imagine he should be kept in a close chamber, into which not one particle of fresh air must be admitted. Instead of this, there ought to be a constant stream of fresh air let into a sick person's chamber, so as to keep it moderately cool. Indeed its degree of warmth ought never to be greater than is agreeable to one in perfect health

Nothing spoils the air of a sick person's chamber, or hurts the patient more, than a number of people breathing in it. When the blood is inflamed, or the humours in a putrid state, air that has been breathed repeatedly will greatly increase the disease. Such air not only loses its spring, and becomes unfit for the purpose of respiration, but acquires a noxious quality, which renders it in a manner poisonous to the sick.

In fevers, when the patient's spirits are low and depressed, he is not only to be supported with cordials, but every method should be taken to cheer and comfort his mind. Many, from a mistaken zeal, when they think a person in danger, instead of solacing his mind with the hopes and cosolations of religion, frighten him with the views of hell and damnation. It would be unsuitable here to dwell upon the impropriety and dangerous consequences of this conduct; it often hurts the body, and there is reason to believe seldom benefits the soul.

Among common people, the very name of a fever generally suggests the necessity of bleeding. This notion seems to have taken its rise from most fevers in this country having been formerly of an inflammatory nature; but true inflammatory fevers are now seldom to be met with. Sedentary occupations, and a different manner of living, have so changed the state of diseases in Britain, that there is now hardly one fever in ten where the lancet is necessary. In most low, nervous, and putrid fevers, which are now so common, bleeding is really hurtful, as it weakens the patient, sinks his spirits, &c. We would recommend this general rule.—Never to bleed at the beginning of a fever, unless there be evident signs of inflammation. Bleeding is an excellent medicine when necessary, but should never be wantonly performed.

It is likewise a common notion, that sweating is always necessary in the beginning of a fever. When the fever proceeds from an obstructed perspiration, this notion is not ill-founded. If the patient only lies in bed, bathes his feet and legs in warm water, and drinks freely of warm water-gruel, or any other weak diluting liquor, he will seldom fail to perspire freely. The warmth of the bed, and the diluting drink, will relax the universal spasm, which generally affects the skin at the beginning of a fever; it will open the pores, and promote the perspiration, by means of which the fever may often be carried off. But instead of this, the common practice is to heap clothes upon the patient, and to give him things of a hot nature, as spirits, spiceries, &c. which fire his blood, increase the spasms and render the disease more dangerous.

In all fevers, a proper attention should be paid to the patient's longings. These are the calls of Nature, and often point out what may be of real use. Patients are not indeed to be indulged in every thing that the sickly appetite may crave; but it is generally right to let them have a little of what they eagerly desire, though it may not seem altogether proper. What the patient longs for, his stomach will generally digest; and such things have sometimes a very happy effect.

When a patient is recovering from a fever, great care is necessary to prevent a relapse. Many persons, by too soon imagining themselves well, have lost their lives, or contracted other diseases of an obstinate nature. As the body after a fever is weak and delicate, it is necessary to guard against catching cold. Moderate exercise in the open air will be of use, but great fatigue is by all means to be avoided: agreeable company will also have a good effect. The diet must be light and nourishing. It should be taken frequently, but in small quantities. It is dangerous, at such a time, to eat as much as the stomach may crave.

CHAP. XIV.

Of INTERMITTING FEVERS, or AGUES.

INTERMITTING fevers afford the best opportunity both of observing the nature of a fever, and also the effects of medicine. No person can be at a loss to distinguish an intermitting fever from any other, and the proper medicine for it is now almost universally known.

The several kinds of intermitting fevers take their name from the period in which the fit returns, as quotidian, tertian, quartan, &c.

CAUSES.——Agues are occasioned by effluvia from putrid stagnating water. This is evident from their abounding in rainy seasons, and being most frequent in countries where the soil is marshy, as in Holland, the Fens of Cambridgeshire, the Hundreds of Essex, &c. This disease may also be occasioned by eating too much stone fruit, by a poor watery diet, damp houses, evening dews, lying upon the damp ground, watching, fatigue, depressing passions, and the like.

When the inhabitants of a high country remove to a low one, they are generally seized with intermitting fevers, and to such the disease is most apt to prove fatal. In a word, whatever relaxes the solids, diminishes the perspiration, or obstructs the circulation in the capillary or small vessels, disposes the body to agues.

SYMPTOMS.——An intermitting fever generally begins with a pain of the head and loins, weariness of the limbs, coldness of the extremities, stretching, yawning, with sometimes great sickness and vomitting; to which succeed shivering and violent shaking. Afterwards the skin becomes moist, and a profuse sweat breaks out, which generally terminates the fit of paroxysm. Sometimes indeed the disease comes on suddenly, when the person thinks himself in perfect health; but it is more commonly preceded by listlessness, loss of appetite, and the symptoms mentioned above

REGIMEN.——While the fit continues, the patient ought to drink freely of water-gruel, orange-whey, weak cammomile tea; or, if his spirits be low, small wine whey sharpened with the juice of lemon. All his drink should be warm, as that will assist in bringing on the sweat, and consequently shorten the paroxysm.

Dr. Lind says, that twenty or twenty-five drops of laudanum put into a cup of the patient's drink, and given about half an hour after the commencement of the hot fit, promotes the sweat, shortens the fit, relieves the head, and tends greatly to remove the disease.

Between the paroxysms, the patient must be supported with food that is nourishing, but light and easy of digestion, as veal or chicken broths, sago, gruel with a little wine, light puddings, and such like. His drink may be small negus, acidulated with the juice of lemons or oranges, and sometimes a little weak punch. He may likewise drink infusions of bitter herbs, as cammomile, wormood, or water-trefoil, and may now and then take a glass of small wine, in which gention root, centaury, or some other bitter, has been infused.

As the chief intentions of cure in an ague are to brace the solids, and promote perspiration, the patient ought to take as much exercise between the fits as he can bear. If he be able to go abroad, riding on horseback, or in a carriage, will be of great service. But if he cannot bear that kind of exercise, he ought to take such as his strength will permit. Nothing tends more to prolong an intermitting fever, than indulging a lazy indolent disposition.

Intermitting fevers, under a proper regimen, will often go off without medicine: and when the disease is mild, in an open dry country, there is seldom any danger from allowing it to take its course; but when the patient's strength seems to decline, or the paroxysms are so violent that his life is in danger, medicine ought immediately to be administered. This however should never be done till the disease be properly formed' that is to say, till the patient has had several fits of shaking and sweating.

MEDICINE.——The first thing to be done in the cure of an intermitting fever is to cleanse the stomach and bowels. This not only renders the application of other medicines more safe, but likewise more efficacious. In this disease, the stomach is generally loaded

with cold viscid phlegm, and frequently great quantities of bile are discharged by vomit; which plainly points out the necessity of such evacuations. Vomits are therefore to be administered before the patient takes any other medicine. A dose of ipecacuanha will generally answer this purpose very well. A scruple, or half a dram, of the powder will be sufficient for an adult, and for a younger person the dose must be less in proportion. After the vomit begins to operate, the patient ought to drink plentifully of weak cammomile-tea. The vomit should be taken two or three hours before the return of the fit, and may be repeated at the distance of two or three days. Vomits not only cleanse the stomach, but increase the perspiration, and all the other secretions, which render them of such importance, that they often cure intermitting fevers without the assistance of any other medicine.

Purging medicines are likewise useful and often necessary in intermitting fevers. A smart purge has been known to cure an obstinate ague, after the Peruvian bark and other medicine had been used in vain. Vomits however are more suitable in this disease, and render purging less necessary; but if the patient be afraid to take a vomit, he ought in this case to cleanse the bowels by a dose or two of Glauber's salt, jalap, or rhubarb.

Bleeding may sometimes be proper at the beginning of an intermitting fever, when excessive heat, a delirium, &c. give reason to suspect an inflammation; but as the blood is seldom in an inflammatory state in intermitting fevers, this operation is rarely necessary. When frequently repeated, it tends to prolong the disease.

After proper evacuations, the patient may safely use the Peruvian bark, which may be taken in any way that is most agreeable to him. No preparation of the bark seems to answer better than the most simple form in which it can be given, viz. in powder.

Two ounces of the best Peruvian bark, finely powdered, may be divided into twenty-four doses. These may either be made into bolusses as they are used, with a little syrup of lemon, or mixed in a glass of red wine, a cup of camomile-tea, water-gruel, or any other drink that is more agreeable to the patient.

In an ague which returns every day, one of the above doses may be taken every two hours during the interval of the fits. By this method the patient will be able to take five or six doses between each paroxysm. In a tertian, or third day ague, it will be sufficient to take a dose every third hour during the interval, and in a quartan every fourth. If the patient cannot take so large a dose of the bark, he may divide each of the powders into two parts, and take one every hour, &c. For a young person, a smaller quantity of this medicine will be sufficient, and the dose must be adapted to the age, constitution, and violence of the symptoms. In very obstinate intermitting fevers, as well as in cases of gangrene or mortification, cinchora, (i. e. the Peruvian bark) must be thrown in as fast as the stomach will bear it.

The above quantity of bark will frequently cure an ague; the patient, however, ought not to leave off taking the medicine as soon as

the paroxysms are stopped, but should continue to use it till there is reason to believe the disease is entirely overcome. Most of the failures in the cure of this disease are owing to patients not continuing to use the medicine long enough. They are generally directed to take it till the fits are stopped, then to leave it off, and begin again at some distance of time; by which means the disease gathers strength, and often returns with as much violence as before. A relapse may always be prevented by the patient's continuing to take doses of the medicine for some time after the symptoms disappear. This is both the most safe and effectual method of cure.

An ounce of gentian root, calamus aromaticus, and orange-peel, of each half an ounce, with three or four handfuls of camomile flowers, and a handful of coriander-seed, all bruised together in a mortar, may be used in form of infusion or tea. About half a handful of these ingredients may be put into a tea-pot, and an English pint of boiling water poured on them. A cup of this infusion drank three or four times a day, will greatly promote the cure. Such patients as cannot drink the watery infusion, may put two handfuls of the same ingredients into a bottle of white wine, and take a glass of it twice or thrice a day. If patients drink freely of the above, or any other proper infusion of bitters, a smaller quantity of bark than is generally used will be sufficient to cure an ague. We cannot however omit taking notice, that the Peruvian bark is very often adulterated, and that it requires considerable skill to distinguish between the genuine and the false. This ought to make people very cautious of whom they purchase it.

Those who cannot swallow the bark in substance, may take it in decoction or infusion. An ounce of bark in powder may be infused in a bottle of white wine for four or five days, frequently shaking the bottle; afterwards let the powder subside, and pour off the clear liquor. A wine glass may be drank three or four times a day, or oftener, as there is occasion. If the decoction be more agreeable, an ounce of the bark, and two drams of snake-root bruised, with an equal quantity of salt of wormwood, may be boiled in a quart of water to an English pint. To the strained liquor may be added an equal quantity of red wine, and a glass of it taken frequently.

In obstinate agues, the bark will be found much more efficacious when assisted by brandy, or other warm cordials, than taken alone. This I have had frequently occasion to observe in a country where intermittent fevers were endemical. The bark seldom succeeded unless assisted by snake-root, ginger, canella alba, or some other warm aromatic. When the fits are very frequent and violent, in which case the fever often approaches towards an inflammatory nature, it will be safer to keep out the aromatics, and to add salt of tartar in their stead. But in obstinate tertian or quartan, in the end of autumn or beginning of winter, warm and cordial medicines are absolutely necessary.

In obstinate agues, when the patient is old, the habit phlegmatic, the season rainy, the situation damp, or the like, it will be necessary to mix with two ounces of the bark, half an ounce of Virginian snake-

root, and a quarter of an ounce of ginger, or some other warm aromatic; but when the symptoms are of an inflammatory nature, half an ounce of salt of wormwood, or salt of tartar, may be added to the above quantity of bark.

As autumnal and winter agues generally prove much more obstinate than those which attack the patient in spring or summer, it will be necessary to continue the-use of medicines longer in the former than in the latter. A person who is seized with an intermitting fever in the beginning of winter, ought frequently, if the season proves rainy, to take a little medicine, although the disease may seem to be cured, to prevent a relapse, till the return of the warm season. He ought likewise to take care not to be much abroad in wet weather, especially in cold easterly winds.

When agues are not properly cured, they often degenerate into obstinate chronical diseases, as the dropsy, jaundice, &c. For this reason all possible care should be taken to have them radically cured, before the constitution has been much impaired.

Though nothing is more rational than the method of treating intermitting fevers, yet by some strange infatuation, more charms and whimsical remedies are daily used for removing this than any other disease. There is hardly an old woman who is not in possession of a nostrum for stopping an ague; and it is amazing with what readiness their pretensions are believed. Those in distress eagerly grasp at any thing that promises sudden relief; but the shortest way is not always the best in the treatment of diseases. The only method to obtain a safe and lasting cure, is gradually to assist Nature in removing the cause of the disease.

Some indeed try bold or rather fool-hardy experiments to cure agues, as drinking great quantities of strong liquors, jumping into a river, taking arsenic, &c. These may sometimes have the desired effect, but must always be attended with danger. Arsenic is commonly used in Poland as a quack remedy for intermittents; but in no case should it be given, unless it is directed by a physician. When there is any degree of inflammation, or the least tendency to it, such experiments may prove fatal. The only patient whom I remember to have lost in an intermitting fever, evidently killed himself by drinking strong liquor, which some person had persuaded him would prove an infallible remedy.

Many dirty things are extolled for the cure of intermitting fevers, as spiders' cobwebs, snuffings of candles, &c. Though these may sometimes succeed, yet their very nastiness is sufficient to set them aside, especially when cleanly medicines will answer the purpose better. The only medicine that can be depended upon for thoroughly curing an intermitting fever, is the Peruvian bark. It may always be used with safety; and I can honestly declare, that in all my practice I never knew it fail, when combined with the medicines mentioned above, and duly persisted in.

Where agues are endemical, even children are often afflicted with that disease. Such patients are very difficult to cure, as they can seldom be prevailed upon to take the bark, or any other disagreeable

medicine. One method of rendering this medicine more palatable, is to make it into a mixture with distilled waters and syrup, and afterwards to give it an agreeable sharpness with the elixer or spirit of vitriol. This both improves the medicine, and takes off the nauseous taste. In cases where the bark cannot be administered, the *saline mixture* (see Appendix) may be given with advantage to children, to whom cinchona (Peruvian bark) may be administered in form of clyster when they will not take it by the mouth.

Wine-whey is a very proper drink for a child in an ague; to half an English pint of which may be put a teaspoonful of the spirit of hartshorn. Exercise is likewise of considerable service; and when the disease proves obstinate, the child ought, if possible, to be removed to a warm dry air. The food ought to be nourishing, and sometimes a little generous wine should be allowed.

To children, and such as cannot swallow the bark, or when the stomach will not bear it, it may be given by clyster. Half an ounce of the extract of bark, dissolved in four ounces of warm water, with the addition of half an ounce of sweet oil, and six or eight drops of laudanum, is the form recommended by Dr. Lind for an adult, and this is to be repeated every fourth hour, or oftener, as the occasion shall require. For children the quantity of extract and laudanum must be proportionably lessened. Children have been cured of agues by making them wear a waistcoat with powdered bark quilted between the folds of it; by bathing them frequently in a strong decoction of the bark, and by rubbing the spine with strong spirits, or with a mixture of equal parts of laudanum and the saponaceous liniment.

We have been the more full upon this disease, because it is very common, and because few patients in an ague apply to physicians, unless in extremities. There are, however, many cases in which the disease is very irregular, being complicated with other diseases, or attended with symptoms which are both very dangerous and very difficult to understand. All these we have purposely passed over, as they would only bewilder the generality of readers. When the disease is very irregular, or the symptoms dangerous, the patient ought immediately to apply to a physician, and strictly to follow his advice.

To prevent agues, people must endeavour to avoid their causes. These have been already pointed out in the beginning of this section: we shall therefore only add one preventive medicine, which may be of use to such as are obliged to live in low marshy countries, or who are liable to frequent attacks of this disease.

Take an ouce of the best Peruvian bark; Virginian snake-root, and orange-peel, of each half an ounce; bruise them all together, and infuse for five or six days in a bottle of brandy, Holland gin, or any good spirit; afterwards pour off the clear liquor, and take a wine glass of it twice or thrice a day. This indeed is recommending a dram; but the better ingredients in a great measure take off the ill effects of the spirit. Those who do not chuse it in brandy, may infuse it in wine; and such as can bring themselves to chew the bark will find that method succeed very well. Gention root, or calamus

aromaticus, may also be chewed by turns for the purpose. All bitters seem to be antidotes to agues, especially those that are warm and astringent.

CHAP. XV.

OF AN ACUTE CONTINUAL FEVER.

THIS fever is denominated acute, ardent, or inflammatory. It most commonly attacks the young, or persons about the prime and vigour of life, especially such as live high, abound with blood, and whose fibres are strong and elastic. It seizes people at all seasons of the year; but is most frequent in the spring and beginning of summer.

CAUSES.——An ardent fever may be occasioned by any thing that overheats the body, or produces plethora, as violent exercise, sleeping in the sun, drinking strong liquors, eating spiceries, a full diet, with little exercise, &c. It may likewise be occasioned by whatever obstructs the perspiration, as lying on the damp ground, drinking cold liquor when the body is hot, night watching, or the like.

SYMPTOMS.——A rigour of chilliness generally ushers in this fever, which is soon succeeded by great heat, a frequent and full pulse, pain of the head, dry skin, redness of the eyes, a florid countenance, pains in the back, loins, &c. To these succeed difficulty of breathing, sickness, with an inclination to vomit. The patient complains of great thirst, has no appetite for solid food, is restless, and his tongue generally appears black and rough.

A delirium, excessive restlessness, great oppression of the breast, with laborious respiration, starting of the tendons, hiccup, cold clammy sweats, and an involuntary discharge of urine, are very dangerous symptoms.

As this disease is always attended with danger, the best medical assistance ought to be procured as soon as possible. A physician may be of use at the beginning, but his skill is often of no avail afterwards. Nothing can be more unaccountable than the conduct of those who have it in their power, at the beginning of a fever, to procure the best medical assistance, yet put off till things come to an extremity. When the disease, by delay or wrong treatment, has become incurable, and has exhausted the strength of the patient, it is vain to hope for relief from medicine. Physicians may indeed assist Nature; but their attempts must ever prove fruitless, when she is no longer able to co-operate with their endeavours.

REGIMEN.——From the symptoms of this disease, it is evident that the blood and other humours require to be attenuated; that the perspiration, urine, saliva, and all the other secretions, are in too small quantity; that the vessels are rigid, and the heat of the whole body too great: all these clearly point out the necessity of a regimen calculated to dilute the blood, correct the acrimony of the humours, allay the excessive heat, remove the spasmodic stricture of the vessels, and promote the secretions.

These important purposes may be greatly promoted by drinking plentifully of diluting liquors; as water-gruel or oatmeal-tea, clear whey, barley-water, balm-tea, apple-tea, &c. These may be sharpened with juice of orange, jelly of currants, raspberries, and such like: orange-whey is likewise an excellent cooling drink. It is made by boiling among milk and water a bitter orange sliced, till the curd separates. If no orange can be had, a lemon, a little cream of tartar, or a few spoonfuls of vinegar, will have the same effect. Two or three spoonfuls of white wine may occasionally be added to the liquor when boiling.

If the patient be costive, an ounce of tamarinds, with two ounces of stoned raisins of the sun, and a couple of figs, may be boiled in three English pints of water to a quart. This makes a very pleasant drink, and may be used at discretion. The common *pectoral decoction* (see the Appendix) is likewise a very proper drink in this disease. A tea-cup full of it may be taken every two hours, or oftener if the patient's heat and thirst be very great.

The above liquids must all be drank a little warm. They may be used in smaller quantities at the beginning of a fever, but more freely afterwards, in order to assist in carrying off the disease by promoting the different excretions. We have mentioned a variety of drinks, that the patient may have it in his power to chuse those which are most agreeable; and that, when tired of one, he may have recourse to another.

The patient's diet must be very spare and light. All sorts of flesh-meats, and even chicken-broths, are to be avoided. He may be allowed groat-gruel, panado, or light bread boiled in water; to which may be added a few grains of common salt and a little sugar, which will render it more palatable. He may eat roasted apples with a little sugar, toasted bread with jelly of currants, boiled prunes, &c.

It will greatly relieve the patient, especially in a hot season, to have fresh air frequently let into his chamber. This however, must always be done in such a manner as not to endanger his catching cold.

It is too common in fevers to load the patient with bed clothes, under the pretence of making him sweat, or defending him from the cold. This custom has many ill effects. It increases the heat of the body, fatigues the patient, and retards, instead of promoting, the perspiration.

Sitting upright in bed, if the patient is able to bear it, will often have a good effect. It relieves the head, by retarding the motion of the blood to the brain. But this posture ought never to be continued too long: and if the patient is inclined to sweat, it will be more safe to let him lie, only raising his head a little with pillows.

Sprinkling the chamber with vinegar, juice of lemon, or vinegar and rose-water, with a little nitre dissolved in it, will greatly refresh the patient. This ought to be done frequently, especially if the weather be hot.

The patient's mouth should be often washed with a mixture of water and honey, to which a little vinegar may be added, or with a decoction of figs in barley-water. His feet and hands ought likewise

frequently to be bathed in lukewarm water; especially if the head is affected.

The patient should be kept as quiet and easy as possible. Company, noise, and every thing that disturbs the mind, is hurtful. Even too much light, or any thing that affects the senses, ought to be avoided. His attendants should be as few as possible, and they ought not to be too often changed. His inclinations ought rather to be soothed than contradicted; even the promise of what he craves will often satisfy him as muc h as its reality.

MEDICINE.——In this and all other fevers attended with a hard, full quick pulse, bleeding is of the greatest importance. This operation ought always to be performed as soon as the symptoms of an inflammatory fever appear. The quantity of blood to be taken away, however, must be in proportion to the strength of the patient, and the violence of the disease. If after the first bleeding the fever should increase, and the pulse become more frequent and hard, there will be a necessity for repeating it a second, and perhaps a third, or even a fourth time, which may be done at the distance of twelve, eighteen, or twenty-four hours from each other, as the symptoms require. If the pulse continues soft, and the patient is tolerably easy after the first bleeding, it ought not to be repeated.

If the heat and fever be very great, forty or fifty drops of the *spirit of nitrous ether* (dulcified or sweet spirit of nitre) may be made into a draught, with an ounce of rose water, two ounces of common water, and half an ounce of simple syrup, or a bit of loaf-sugar. This draught may be given to the patient every three or four hours while the fever is violent; afterwards once in five or six hours will be sufficient.

If the patient be afflicted with retching, or an inclination to vomit, it will be right to assist Nature's attempts, by giving him weak camomile-tea, or lukewarm water, to drink.

If the body is bound, a clyster of milk and water, with a little salt, and a spoonful of sweet oil or fresh butter in it, ought to be daily administered. Should this not have the desired effect, a tea spoonful of magnesia alba, or cream of tartar, may be frequently put into his drink. He may likewise eat tamarinds, boiled prunes, roasted apples, and the like.

If about the tenth, eleventh, or twelfth day, the pulse become more soft, the tongue moister, and the urine begins to let fall a reddish sediment, there is reason to expect a favorable issue to the disease. But if instead of these symptoms, the patient's spirits grow languid, his pulse sink, and his breathing becomes difficult; with a stupor, trembling of the nerves, starting of the tendons, &c. there is reason to fear that the consequences will be fatal. In this case blistering plasters must be applied to the head, ankles, inside of the legs or thighs, as there may be occasion; poultices of wheat-bread, mustard and vinegar may likewise be applied to the soles of the feet, and the patient must be supported with cordials, as strong wine-whey, negus, sago-gruel with wine in it, and such like.

The juice of the China or sweet orange is used in its simple state with great advantage, both as a cooling medicine, and as an useful

antiseptic in fevers of the worst kinds, as well as in many other acute diseases, being highly beneficial in alleviating thirst and resisting putrefaction.

A proper regimen is not only necessary during the fever, but likewise after the patient begins to recover. By neglecting this, many relapse, or fall into other diseases, and continue valetudinary for life. Though the body is weak after a fever, yet the diet for some time ought to be rather light than of too nourishing a nature. Too much food, drink, exercise, company, &c. are carefully to be avoided. The mind ought likewise to be kept easy, and the patient should not attempt to pursue study, or any business that requires intense thinking.

If the digestion be bad, or the patient is seized at times with feverish heats, an infusion of Peruvian bark in cold water will be of use. It will strengthen the stomach, and help to subdue the remains of the fever.

When the patient's strength is pretty well recovered, he ought to take some gentle laxative. An ounce of tamarinds and a dram of senna may be boiled for a few minutes in an English pint of water, and an ounce of manna dissolved in the decoction; afterwards it may be strained, and a teacupful drank every hour till it operates. This dose may be repeated twice or thrice, five or six days intervening.

Those who follow laborious employments ought not to return too soon to their labour after a fever, but should keep easy till their strength and spirits are sufficiently recruited.

OF THE PLEURISY.

THE true pleurisy is an inflammation of that membrane called the *pleura*, which lines the inside of the breast. It is distinguished into the moist and dry. In the former, the patient spits freely; in the latter, little or not at all. There is likewise a species of this disease which is called the *spurious* or *bastard pleurisy*, in which the pain is more external, and chiefly affects the muscles between the ribs. The pleurisy prevails among labouring people, especially such as work without doors, and are of a sanguine constitution. It is most frequent in the spring season.

CAUSES.——The pleurisy may be occasioned by whatever obstructs the perspiration; as cold northerly winds; drinking cold liquors when the body is hot; sleeping without doors on the damp ground; wet clothes; plunging the body into cold water, or exposing it to the cold air, when covered with sweat, &c. It may likewise be occasioned by drinking strong liquors; by the stoppage of usual evacuations; as old ulcers, issues, sweating of the feet or hands, &c. the sudden striking in of any eruption, as the itch, the measles, or the small-pox. Those who have been accustomed to bleed at a certain season of the year are apt, if they neglect it, to be seized with a pleurisy. Keeping the body too warm by means of fire, clothes, &c. renders it more liable to this disease. A pleurisy may likewise be occa-

sioned by voiolent exercise, as running, wrestling, leaping, or by supporting great weight, blows on the breast, &c. A bad conformation of the body renders persons more liable to this disease, as a narrow chest, a straitness of the arteries of the pleura, &c.

SYMPTOMS.——This, like most other fevers, generally begins with chilliness and shivering, which are followed by heat, thirst, and restlessness. To these succeeds a violent pricking pain in one of the sides among the ribs. Sometimes the pain extends towards the backbone, sometimes towards the fore-part of the breast, and at other times towards the shoulder blades. The pain is generally most violent when the patient draws his breath.

The pulse in this disease is commonly quick and hard, the urine high coloured; and if blood be let, it is covered with a tough crust, or buffy coat. The patient's spittle is at first thin, but afterwards it becomes grosser, and is often streaked with blood.

REGIMEN.——Nature generally endeavours to carry off this disease by a critical discharge of blood from some part of the body, by expectoration, sweat, loose stools, thick urine, or the like. We ought therefore to second her intentions by lessening the force of the circulation, relaxing the vessels, diluting the humours, and promoting expectoration.

For these purposes the diet, as in the former disease, ought to be cool, slender, and diluting. The patient must avoid all food that is viscid, hard of digestion, or that affords much nourishment; as flesh, butter, cheese, eggs, milk, and also every thing that is of a heating nature. His drink may be whey, or an infusion of pectoral and balsamic vegetables; for which see the Appendix.

Barley-water, with a little honey or jelly of currants mixed with it, is likewise a very proper drink in this disease. It is made by boiling an ounce of pearl barley in three English pints of water to two, which must afterwards be strained. The decoction of figs, raisins, barley, recommended in the preceding disease, is here likewise very proper. These and other diluting liquors are not to be drank in large quantities at a time; but the patient ought to keep continually sipping them, so as to render his mouth and throat always moist. All his food and drink should be taken a little warm.

The patient should be kept quiet, cool, and every way easy, as directed under the foregoing disease. His feet and hands ought daily to be bathed in lukewarm water; and he may sometimes sit up in bed for a short space, in order to relieve his head.

MEDICINE.——Almost every person knows, when a fever is attended with a violent pain of the side, and a quick hard pulse, that bleeding is necessary. When these symptoms come on, the sooner this operation is performed the better; and the quantity at first must be pretty large, provided the patient is able to bear it. A large quantity of blood let at once, in the beginning of a pleurisy, has a much better effect than repeated small bleedings. A man may lose twelve or fourteen ounces of blood as soon as it is certainly known that he is seized with a pleurisy. For a younger person, or one of a delicate constitution, the quantity must be less.

If, after the first bleeding, the stich, with the other violent symptoms, should still continue, it will be necessary, at the distance of twelve or eighteen hours, to let eight or nine ounces more. If the symptoms do not then abate, and the blood shews a strong buffy coat, a third or even a fourth bleeding may be requisite. If the pain of the side abates, the pulse becomes softer, or the patient begins to spit freely, bleeding ought not to be repeated. This operation is seldom necessary after the third or fourth day of the fever, and ought not then to be performed, unless in the most urgent circumstances.

The blood may be many ways attenuated without bleeding. There are likewise many things that may be done to ease the pain of the side without this operation, as fomenting, blistering, &c. Fomentations may be made by boiling a handful of the flowers of elder, camomile, and common mallows, or any other soft vegetables, in a proper quantity of water. The herbs may be either put into a flannel bag, and applied warm to the side, or flannels may be dipped in the decoction, afterwards wrung out, and applied to the part affected, with as much warmth as the patient can easily bear. As the cloths grow cool, they must be changed, and great care taken that the patient do not catch cold. A bladder may be filled with warm milk and water, and applied to the side, if the above method of fomenting be found inconvenient. Fomentations not only ease the pain, but relax the vessels, and prevent the stagnation of the blood and other humours. The side may likewise be frequently rubbed with a little of the *liniment of ammonia* (volatile liniment), described in the Appendix.

Topical bleeding has often a very good effect in this disease. It may either be performed by applying a number of leeches to the part affected, or by cupping, which is both a more certain and expeditious method than the other.

Leaves of various plants might likewise be applied to the patient's side with advantage. I have often seen great benefit from young cabbage leaves applied warm to the side in a pleurisy. These not only relax the parts, but likewise draw off a little moisture, and may prevent the necessity of blistering-plasters; which, however, when other things fail, must be applied.

If the stich continues after repeated bleedings, fomentations, &c. a blistering-plaster must be applied over the part affected, and suffered to remain for two days. This not only procures a discharge from the side, but takes off the spasm, and by that means assists in removing the cause of the disease. To prevent a strangury when the blistering-plaster is on, the patient may drink freely of the *Arabic emulsion*, as directed in the Appendix.

If the patient is costive, a clyster of thin water gruel, or of barley-water, in which a handful of mallows or any other emollient vegetable has been boiled, may be daily administered. This will not only empty the bowels, but have the effect of a warm fomentation applied to the inferior viscera, which will help to make a derivation from the breast.

The expectoration may be promoted by sharp, oily, and mucilaginous medicines. For this purpose, an ounce of the oxymel, or the vi-

negar of squills, may be added to six ounces of the pectoral decoction, and two table-spoonsful of it taken every two hours.

Should the squill disagree with the stomach, the *oily emulsion* may be administered; or, in place of it, two ounces of the oil of sweet almonds, or oil of olives, and two ounces of the syrup of violets may be mixed with as much sugar-candy, powdered, as will make an electuary of the consistence of honey. The patient may take a tea-spoonful of this frequently, when the cough is troublesome. Should oily medicines prove nauseous, which is sometimes the case, two table-spoonsful of the *solution of gum ammoniac* in barley-water may be given three or four times a-day.

If the patient does not perspire, but has a burning heat upon his skin, and passes very little water, some small doses of purified nitre and camphire will be of use. Two drams of the former may be rubbed with five or six grains of the latter in a mortar, and the whole divided into six doses, one of which may be taken every five or six hours in a little of the patient's ordinary drink.

We shall only mention one medicine more, which some reckon almost a specific in the pleurisy, viz. the *decoction of the seneka rattle-snake root.* After bleeding and other evacuations have been premised, the patient may take two, three, or four table-spoonsful of this decoction, according as his stomach will bear it, three or four times a-day. If it should occasion vomiting, two or three ounces of simple cinnamon-water may be mixed with the quantity of decoction here directed, or it may be taken in smaller doses. As this medicine promotes perspiration and urine, and likewise keeps the body easy, it may be of some service in a pleurisy, or any other inflammation of the breast.

No one will imagine that these medicines are all to be used at the same time. We have mentioned different things on purpose that people may have it in their power to chuse; and likewise, that when one cannot be obtained, they may make use of another. Different medicines are no doubt necessary in the different periods of a disorder; and where one fails of success, or disagrees with the patient, it will be proper to try another.

What is called the crisis, or height of the fever, is sometimes attended with very alarming symptoms, as difficulty of breathing, an irregular pulse, convulsive motions, &c. These are apt to frighten the attendants, and induce them to do improper things, as bleeding the patient, given him strong stimulating medicines, or the like. But they are only the struggles of Nature to overcome the disease, in which she ought to be assisted by plenty of diluting drink, which is then peculiarly necessary. If the patient's strength however be much exhausted by the disease, it will be necessary at this time to support him with frequent small draughts of wine-whey, negus, or the like.

When the pain and fever are gone, it will be proper, after the patient has recovered sufficient strength, to give him some gentle purges, as those directed towards the end of an acute continual fever. He ought likewise to use a light diet, of easy digestion, and his drink should be butter-milk, whey, and other things of a cleansing nature.

OF THE BASTARD PLEURISY.

That species of pleurisy which is called the *bastard*, or *spurious*, generally goes off by keeping warm for a few days, drinking plenty of diluting liquors, and observing a cooling regimen.

It is known by a dry cough, a quick pulse, and a difficulty of lying on the affected side, which last does not always happen in the true pleurisy. Sometimes indeed this disease proves obstinate, and requires bleeding, with cupping, and scarifications of the part affected. These, together with the use of nitrous and other cooling medicines, seldom fail to effect a cure.

OF THE PARAPHRENITIS.

The *paraphrenitis*, or inflammation of the diaphragm, is so nearly connected with the pleurisy, and resembles it so much in the manner of treatment, that it is scarcely necessary to consider it as a separate disease.

It is attended with a very acute fever, and an extreme pain in the part affected, which is generally augmented by coughing, sneezing, drawing in the breath, taking food, going to stool, making water, &c. Hence the patient breathes quick, and draws in his bowels to prevent the motion of the diaphragm; is restless, anxious, has a dry cough, a hiccup, and often a delirium. A convulsive laugh, or rather a kind of involuntary grin, is no uncommon symptom of this malady.

Every method must be taken to prevent a suppuration, as it is impossible to save the patient's life when this happens. The regimen and medicine are in all respects the same as in the pleurisy. We shall only add, that in this disease, emollient clysters are peculiarly useful, as they relax the bowels, and by that means make a derivation from the part affected.

CHAP. XVII.

Of a PERIPNEUMONY, or INFLAMMATION of the LUNGS.

As this disease affects an organ which is absolutely necessary to life, it must always be attended with danger. Persons who abound with thick blood, whose fibres are tense and rigid, who feed upon gross aliment, and drink strong viscid liquors, are most liable to a peripneumony. It is generally fatal to those who have a flat breast, or narrow chest, and to such as are afflicted with an asthma, especially in the decline of life. Sometimes the inflammation reaches to one lobe of the lungs only; at other times the whole of the organ is affected, in which case the disease can hardly fail to prove fatal.

When the disease proceeds from a viscid pituitous matter obstructing the vessels of the lungs, it is called a *spurious* or *bastard peripneumony*. When it arises from a thin acrid defluction on the lungs, it is denominated a *catarrhal peripneumony*, &c.

CAUSES.——An inflammation of the lungs is sometimes a primary disease, and sometimes it is the consequence of other diseases, as a quinsy, a pleurisy, &c. It proceeds from the same causes as the pleurisy, viz. an obstructed perspiration from cold, wet clothes, &c. or from an increased circulation of the blood by violent exercise, the use of spiceries, ardent spirits, and such like. The pleurisy and peripneumony are often complicated; in which case the disease is called a *pleuro peripneumony*.

SYMPTOMS.——Most of the symptoms of a pleurisy likewise attend an inflammation of the lungs; only in the latter the pulse is more soft, and the pain less acute; but the difficulty of breathing, and oppression of the breast, are generally greater.

REGIMEN.——As the regimen and medicine are in all respects the same in the true peripneumony as in the pleurisy, we shall not here repeat them, but refer the reader to the treatment of that disease. It may not however be improper to add, that the aliment ought to be more slender and thin in this than in any other inflammatory disease. The learned Dr. Arbuthnot asserts, that even common whey is sufficient to support the patient, and that decoctions of barley, and infusions of fennel roots in warm water with milk, are the most proper both for drink and nourishment. He likewise recommends the steam of warm water taken in by the breath, which serves as a kind of internal fomentation, and helps to attenuate the impacted humours. If the patient has loose stools, but is not weakened by them, they are not to be stopped, but rather promoted by the use of emollient clysters.

It has already been observed, that the *spurious* or *bastard* peripneumony is occasioned by a viscid pituitous matter obstructing the vessels of the lungs. It commonly attacks the old, infirm, and phlegmatic, in winter and wet seasons.

The patient at the beginning is cold and hot by turns, has a small quick pulse, feels a sense of weight upon his breast, breathes with difficulty, and sometimes complains of a pain and giddiness of his head. His urine is usually pale, and his colour very little changed.

The diet, in this as well as in the true peripneumony, must be very slender, as weak broths, sharpened with the juice of orange or lemon, and such like. His drink may be thin water-gruel sweetened with honey, or a decoction of the roots of fennel, liquorice, and quick grass. An ounce of each of these may be boiled in three English pints of water to a quart, and sharpened with a little currant-jelly, or the like.

Bleeding and purging are generally proper at the beginning of this disease; but if the patient's spittle is pretty thick, or well concocted, neither of them are necessary. It will be sufficient to assist the expectoration by some of the sharp medicines recommended for that purpose in the pleurisy, as the solution of gum-ammoniac with oxymel of squills, &c. Blistering-blasters have generally a good effect, and ought to be applied pretty early.

If the patient does not spit, he must be bled according as his strength will permit, and have a gentle purge administered. After-

wards his body may be kept open by clysters, and the expectoration promoted by taking every four hours two table spoonsful of the solution mentioned above.

When an inflammation of the breast does not yield to bleeding, blistering, and other evacuations, it commonly ends in a suppuration, which is more or less dangerous, according to the part where it is situated. When this happens in the pleury, it sometimes breaks outwardly, and the matter is discharged by the wound.

When the suppuration happens within the substance or body of the lungs, the matter may be discharged by expectoration; but if the matter floats in the cavity of the breast, between the pleura and the lungs, it can only be discharged by an incision made betwixt the ribs.

If the patient's strength does not return after the inflammation is to all appearance removed; if his pulse continues quick though soft, his breathing difficult and oppressed; if he has cold shiverings at times, his cheeks flushed, his lips dry; and if he complains of thirst and want of appetite, there is reason to fear a suppuration, and that a phthisis or consumption of the lungs will ensue. We shall therefore next proceed to consider the proper treatment of that disease.

CHAP. XVIII.

OF CONSUMPTIONS.

A CONSUMPTION is a wasting or decay of the whole body from an ulcer, tubercles, or concretions of the lungs, an empyema, a nervous atrophy, or cachexy.

Dr. Arbuthnot observes, that in his time consumptions made up above one tenth part of the bills of mortality in and about London. There is reason to believe they have rather increased since; and we know from experience, that they are not less fatal in some other towns of England than in London.

Young persons, between the age of fifteen and thirty, of a slender make, long neck, high shoulders, and flat breasts, are most liable to this disease.

Consumptions prevail more in England than in any other part of the world, owing perhaps to the great use of animal food and malt liquors, the general application to sedentary employments, and the great quantity of pit-coal which is there burnt; to which we may add the perpetual changes in the atmosphere, or variableness of the weather.

CAUSES.——It has already been observed, that an inflammation of the breast often ends in an imposthume: consequently whatever disposes people to this disease must likewise be considered as a cause of consumption.

Other diseases, by vitiating the habit, may likewise occasion consumptions; as the scurvy, the scrophula or king's evil, the venerial disease, the asthma, small-pox, measles, &c.

As this disease is seldom cured, we shall endeavour the more particularly to point out its causes, in order that people may be enabled to avoid it. These are:

——Confined or unwholesome air. When this fluid is impregnated with the fumes of metals or minerals, it proves extremely hurtful to the lungs, and often corrodes the tender vessels of that necessary organ.

——Violent passions, exertions, or affections of the mind; as grief, disappointment, anxiety, or close application to the study of abstruse arts or sciences.

——Great evacuations; as sweating, diarrhœas, diabetes, excessive venery, the fluor albus, an over-discharge of the menstrual flux, giving suck too long, &c.

——The sudden stoppage of customary evacuations; as the bleeding piles, sweating of the feet, bleeding at the nose, the menses, issues, ulcers, or eruptions of any kind.

——Injuries done to the lungs, calculi, &c. I lately saw the symptoms of a phthisis occasioned by a small bone sticking in the *bronchæ*. It was afterwards vomited along with a considerable quantity of purulent matter, and the patient, by a proper regimen and the use of the Peruvian bark, recovered.

——Making a sudden transition from a hot to a very cold climate, change of apparel, or whatever greatly lessens the perspiration.

——Frequent and excessive debaucheries. Late watching, and drinking strong liquors, which generally go together, can hardly fail to destroy the lungs. Hence the *bon companion* generally falls a sacrifice to this disease.

——Infection. Consumptions are likewise caught by sleeping with the diseased; for which reason this should be carefully avoided. It cannot be of great benefit to the sick, and must hurt those in health.

——Occupations in life. Those artificers who sit much, and are constantly leaning forward, or pressing upon the stomach and breast, as cutlers, tailors, shoe-makers, seamstresses, &c. often die of consumptions. They likewise prove fatal to singers, and all who have occasion to make frequent and violent exertions of the lungs.

——Cold. More consumptive patients date the beginning of their disorders from wet feet, damp beds, night air, wet clothes, or catching cold after the body had been heated, than from all other causes.

Sharp, saline, and aromatic aliments, which heat and inflame the blood, are likewise frequently the cause of consumptions.

We shall only add, that this disease is often owing to an hereditary taint, or a scrophulous habit; in which case it is generally incurable.

SYMPTOMS.——This disease generally begins with a dry cough, which often continues for some months. If a disposition to vomit after eating be excited by it, there is still greater reason to fear an approaching consumption. The patient complains of a more than usual degree of heat, a pain and oppression of the breast, especially

after motion; his spittle is of a saltish taste, and sometimes mixed with blood. He is apt to be sad; his appetite is bad, and his thirst great. There is generally a quick, soft, small pulse; though sometimes the pulse is pretty full, and rather hard. These are the common symptoms of a beginning consumption.

Afterwards the patient begins to spit a greenish, white, or bloody matter. His body is extenuated by the hectic fever, and colliquative sweats, which mutually succeed one another, viz. the one towards night, and the other in the morning. A looseness and an excessive discharge of urine are often troublesome symptoms at this time, and greatly weaken the patient. There is a burning heat in the palms of the hands, and the face generally flushes after eating; the fingers become remarkably small, the nails are bent inwards, and the hair falls off.

At last the swelling of the feet and legs, the total loss of strength, the sinking of the eyes, the difficulty of swallowing, and the coldness of the extremities, shew the immediate approach of death, which however the patient seldom believes to be so near. Such is the usual progress of this fatal disease, which, if not early checked, commonly sets all medicine at defiance.

REGIMEN.——On the first appearance of a consumption, if the patient lives in a large town, or any place where the air is confined, he ought immediately to quit it, and to make choice of a situation in the country, where the air is pure and free. Here he must not remain inactive, but take every day as much exercise as he can bear.

The best method of taking exercise is to ride on horseback, as this gives the body a great deal of motion without much fatigue. Such as cannot bear this kind of exercise, must make use of a carriage. A long journey, as it amuses the mind by a continual change of objects, is greatly preferable to riding the same ground over and over. Care however must be taken to avoid catching cold from wet clothes, damp beds, or the like. The patient ought always to finish his ride in the morning, or at least before dinner; otherwise it will oftener do harm than good.

It is a pity those who attend the sick seldom recommend riding in this disease till the patient is either unable to bear it, or the malady has become incurable. Patients are likewise apt to trifle with every thing that is in their own power. They cannot see how one of the common actions of life should prove a remedy in an obstinate disease, and therefore they reject it, while they greedily hunt after relief from medicine, merely because they do not understand it.

Those who have strength and courage to undertake a pretty long sea voyage, may expect great advantage from it. This to my knowledge has frequently cured a consumption after the patient was, to all appearance, far advanced in that disease, and where medicine had proved ineffectual. Hence it is reasonable to conclude, that if a voyage were undertaken in due time, it would seldom fail to perform a cure. But physicians seldom order it till the disease is too far advanced, and frequently the patient cannot go a voyage of sufficient length. The late Dr. Buchan said, "though I do not remember to

have seen one instance of a genuine consumption of the lungs cured by medicine, yet I have known a West India voyage work wonders in that dreadful disorder;" and that "a voyage of this kind, if taken in due time, would seldom fail to cure a consumption."

Such as try this method of cure ought to carry as much fresh provisions along with them as will serve for the whole time they are at sea. As milk is not easily obtained in this situation, they ought to live upon fruits, and the broth of chickens, or other young animals which can be kept alive on board. It is scarcely necessary to add, that such voyages should be undertaken, if possible, in the mildest season, and that they ought to be towards a warmer climate.

Those who have not courage for a long voyage may travel into a more southern climate, as the south of France, Spain, or Portugal; and if they find the air of these countries agree with them, they should continue there at least till their health be confirmed.

Next to proper air and exercise, we would recommend a due attention to diet. The patient should eat nothing that is either heating or hard of digestion, and his drink must be of a soft and cooling nature. All the diet ought to be calculated to lessen the acrimony of the humours, and to nourish and support the patient. For this purpose he must keep chiefly to the use of vegetables and milk. Milk alone is of more value in this disease than the whole *materia medica.*

Asses' milk is commonly reckoned preferable to any other; but it cannot always be obtained; besides, it is generally taken in a very small quantity; whereas, to produce any effects, it ought to make a considerable part of the patient's diet. It is hardly to be expected, that a gill or two of asses' milk, drank in the space of twenty-four hours, should be able to produce any considerable change in the humours of an adult; and when people do not perceive its effects soon, they lose hope, and so leave it off. Hence it happens that this medicine, however valuable, very seldom performs a cure. The reason is obvious; it is commonly used too late, is taken in too small quantities, and is not duly persisted in.

I have known very extraordinary effects from asses' milk in obstinate coughs, which threatened a consumption of the lungs; and do verily believe, if used at this period, that it would seldom fail; but if it be delayed till an ulcer is formed, which is generally the case, how can it be expected to succeed?

Asses' milk ought to be drank, if possible, in its natural warmth, and by a grown person, in the quantity of half an English pint at a time. Instead of taking this quantity night and morning only, the patient ought to take it four times, or at least thrice a-day, and to eat a little light bread along with it, so as to make it a kind of meal.

If the milk should happen to purge, it may be mixed with old conserve of roses. When that cannot be obtained, the powder of crabs' claws may be used in its stead. Asses' milk is usually ordered to be drank warm in bed; but as it generally throws the patient in a sweat when taken in this way, it would perhaps be better to give it after he rises. Dr. Reid however observes, that "a peculiar antiphthisical property has been attributed to asses' milk. The only ad-

vantage that it has over cows' milk, consists in its being in a slight degree more easy of digestion." Mint water mixed with the latter will prevent its curdling in the stomach.

Some extraordinary cures in consumptive cases have been performed by women's milk. Could this be obtained in sufficient quantity, we would recommend it in preference to any other. It is better if the patient can suck it from the breast, than to drink it afterwards. I knew a man who was reduced to such a degree of weakness in a consumption, as not to be able to turn himself in bed. His wife was at that time giving suck, and the child happening to die, he sucked her breasts, not with a view to reap any advantage from the milk, but to give her ease. Finding himself, however, greatly benefited by it, he continued to suck her till he became perfectly well, and is at present a strong and healthy man.

Some prefer butter-milk to any other, and it is indeed a very valuable medicine, if the stomach be able to bear it. It does not agree with every person at first; and is therefore often laid aside without a sufficient trial. It should at first be taken sparingly, and the quantity gradually increased, until it comes to be almost the sole food. I never knew it succeed unless where the patient almost lived upon it.

Cows' milk is most readily obtained of any, and though it be not so easily digested as that of asses or mares, it may be rendered lighter, by adding to it an equal quantity of barley-water, or allowing it to stand for some hours, and afterwards taking off the cream.

If it should, notwithstanding, prove heavy on the stomach, a small quantity of brandy or old rum, with a little sugar, may be added, which will render it both more light and nutritive.

It is not to be wondered, that milk should for some time disagree with his stomach that has not been accustomed to digest any thing but flesh and strong liquors, which is the case with many of those who fall into consumptions. We do not however advise those who have been accustomed to animal food and strong liquors to leave them off all at once. This might be dangerous. It will be necessary for such to eat a little once a day of the flesh of some young animal, or rather to use the broth made of chickens, veal, lamb, or such like. They ought likewise to drink a little wine made into negus, or diluted with twice or thrice its quantity of water, and to make it gradually weaker till they can leave it off altogether.

These must be used only as preparatives to a diet consisting chiefly of milk and vegetables, such as rice and milk, or barley and milk, boiled with a little sugar, which is very proper food. Ripe fruits roasted, baked, or boiled, are likewise proper, as goose or currant-berry tarts, apples roasted, or boiled in milk.

The jellies, conserves, and preserves of ripe subacid fruits, ought to be eaten plentifully, as the jelly of currants, conserves of roses, preserved plums, cherries, or China oranges.

Wholesome air, proper exercise, and a diet consisting chiefly of these and other vegetables, with milk, is the only course that can be depended on in a beginning consumption. If the patient has strength

and sufficient resolution to persist in this course, he will seldom be disappointed of a cure.

In a populous town in England (Sheffield), where consumptions are very common, I have frequently seen consumptive patients, who had been sent to the country with orders to ride and live upon milk and vegetables, return in a few months quite plump, and free from any complaint. This indeed was not always the case, especially when the disease was hereditary, or far advanced; but it was the only method in which success was to be expected: where it failed, I never knew medicine succeed.

If the patient's strength and spirits flag, he must be supported by strong broths, jellies, and such like. Some recommend shell-fish in this disorder, and with some reason, as they are nourishing and restorative. I have often known persons of a consumptive habit, where the symptoms were not violent, reap great benefit from the use of oysters. They generally ate them raw, and drank the juice along with them. All the food and drink ought however to be taken in small quantities, lest an overcharge of fresh chyle should oppress the lungs, and too much accelerate the circulation of the blood.

The patient's mind ought to be kept as easy and cheerful as possible. Consumptions are often occasioned, and always aggravated, by a melancholy cast of mind; for which reason music, cheerful company, and every thing that inspires mirth, are highly beneficial. The patient ought seldom to be left alone, as brooding over his calamities is sure to render him worse.

MEDICINE.——Though the cure of this disease depends chiefly upon regimen and the patient's own endeavours, yet we shall mention a few things which may be of service in relieving some of the more violent symptoms.

In the first stage of a consumption, the cough may sometimes be appeased by bleeding; and the expectoration may be promoted by the following medicines. Take fresh squills, gum-ammoniac, and powdered cardamum seeds, of each a quarter of an ounce; beat them together in a mortar, and if the mass proves too hard for pills, a little of any kind of syrup may be added to it. This may be formed into pills of a moderate size, and four or five of them taken twice or thrice a-day, according as the patient's stomach will bear them.

The *lac ammoniacum*, or milk of gum-ammoniac, as it is called, is likewise a proper medicine in this stage of the disease. It may be used as directed in the pleurisy.

A mixture made of equal parts of lemon-juice, fine honey, and syrup of poppies, may likewise be used. Four ounces of each of these may be simmered together in a saucepan, over a gentle fire, and a table-spoonful of it taken at any time when the cough is troublesome.

It is common in this stage of the disease to load the patient's stomach with oily and balsamic medicines. These, instead of removing the cause of the disease, tend rather to increase it by heating the blood, while they pall the appetite, relax the solids, and prove every way hurtful to the patient. Whatever is used for removing the cough, besides

riding and other proper regimen, ought to be medicines of a sharp and cleansing nature; as oxymel, syrup of lemon, &c.

Acids seem to have peculiarly good effects in this disease; they both tend to quench the patient's thirst and to cool the blood. The vegetables' acids, as apples, oranges, lemons, &c. appear to be the most proper. I have known patients suck the juice of several lemons every day with manifest advantage, and would for this reason recommend acid vegetables to be taken in as great quantity as the stomach will bear them.

For the patient's drink, we would recommend infusions of the bitter plants, as ground-ivy, the lesser centaury, camomile flowers, or water-trefoil. These infusions may be drank at pleasure. They strengthen the stomach, promote digestion, and at the same time answer all the purposes of dilution, and quench the thirst much better than things that are luscious or sweet. But if the patient spits blood, he ought to use, for his ordinary drink, infusions or decoctions of the vulnerary roots and plants. [See a formula in the Appendix.]

There are many other mucilaginous plants and seeds, of a healing and agglutinating nature, from which decoctions or infusions may be prepared with the same intention; as the orches, the quince-seed, coltsfoot, linseed, sarsaparilla, &c. It is not necessary to mention the different ways in which these may be prepared. Simple infusion or boiling is all that is necessary, and the dose may be at discretion.

The conserve of roses is here peculiarly proper. It may either be put into the decoction above prescribed, or eaten by itself. No benefit is to be expected from trifling doses of this medicine. I never knew it of any service, unless where three or four ounces at least were used daily for a considerable time. In this way I have seen it produce very happy effects, and would recommend it wherever there is a discharge of blood from the lungs.

When the spitting up of gross matter, oppressions of the breast, and the hectic symptoms, shew that an imposthume is formed in the lungs, we would recommend the Peruvian bark, that being the only drug which has any chance to counteract the general tendency which the humours then have to putrefaction.

An ounce of the *cinchona* in powder may be divided into eighteen or twenty doses, of which one may be taken every three hours through the day, in a little syrup, or a cup of the patient's ordinary drink; for which we recommend tea made of equal parts of coltsfoot, leaves and horehound.

If the bark should happen to purge, it may be made into an electuary, with the conserve of roses, thus: Take old conserve of roses a quarter of a pound, Peruvian bark half an ounce, syrup of orange or lemon, as much as will make it the consistence of honey. This quantity will serve the patient four or five days, and may be repeated as there is occasion.

Such as cannot take the bark in substance, may infuse it in cold water. This seems to be the best menstruum for extracting the virtues of that drug. Half an ounce of bark in powder may be infused for twenty-four hours in half an English pint of water. Afterwards

let it be passed through a fine strainer, and an ordinary tea-cupful of it taken three or four times a-day.

We would not recommend the bark while there are any symptoms of an inflammation of the breast; but when it is certainly known that matter is collected there, it is one of the best medicines which can be used. Few patients indeed have resolution enough to give Peruvian bark a fair trial at this period of the disease, otherwise we have reason to believe that some benefit might be reaped from it.

When it is evident that there is an imposthume in the breast, and the matter can neither be spit up nor carried off by absorption, the patient must endeavour to make it break inwardly, by drawing in the steams of warm water or vinegar with his breath, coughing, laughing, or bawling aloud, &c. When it happens to burst within the lungs, the matter may be discharged by the mouth. Sometimes indeed the bursting of the vomica occasions immediate death by suffocating the patient. When the quantity of matter is great, and the patient's strength exhausted, this is commonly the case. At any rate the patient is ready to fall into a swoon, and should have volatile salts or spirits held to his nose.

If the matter discharged be thick, and the cough and breathing become easier, there may be some hopes of a cure. The diet at this time ought to be light but restorative, as chicken-broths, sago-gruel, rice-milk, &c. the drink, butter-milk or whey, sweetened with honey. This is likewise a proper time for using *cinchona* (the Peruvian bark), which may be taken as directed above.

If the vomica or imposthume should discharge itself into the cavity of the breast, between the pleura and the lungs, there is no way of getting the matter out but by an incision, as has already been observed. As this operation must always be performed by a surgeon, it is not necessary here to describe it. We shall only add, that it is not so dreadful as people are apt to imagine, and that it is the only chance the patient in this case has for his life.

☞ The preceding plan of treating consumptions having been recommended by the late Dr. Buchan, with scarcely any variation, for upwards of five and twenty years, we shall subjoin an account of some methods of cure that have been more recently proposed by gentlemen, who, like him, have endeavoured to render themselves useful in their beneficent profession.

In the year 1779, an Inaugural Thesis or Dissertation was published by J. T. P. Chris. Ebeling, entitled "De Lichen Islandicus," a plant described by our celebrated botanists Ray, Morrison, Hudson, and Lightfoot; also by Linnæus and other foreign writers. Dr. Ebeling informed us, that in some of the northern countries, (Iceland, Russia, &c.) *lichen islandicus*, or Iceland moss, is used, not only as a medicine, but as an article of diet; from the mild, nutritious qualities of which it is evidently possessed, we may account for the good effects which had been said to be derived from it in cases of emaciation and in consumptive disorders, and which, at the time above-

mentioned, had been confirmed by the testimony of many accurate observers.

The lichen is purely and to a high degree mucilaginous; but notwithstanding this plant has been in great repute as a remedy both as aliment and a medicine in pulmonary complaints, and as a restorative in *tabes dorsalis*, it was scarcely noticed in the medical practice of this country until Drs. Crichton, Reece, and Regnault, lately recommended it to the public. We shall have reason to congratulate our readers, if future experience justify the high, we fear too flattering encomiums they have bestowed upon it, as having effected a cure in many cases of phthisis, which those gentlemen, and other writers on the continent, have adduced.

In order to obtain the virtues of the lichen islandicus, it must be infused in boiling water, to separate all the earthy particles which adhere to it, and to take off the bitterness which renders it disagreeable; after which it may be boiled in water, or milk, just as it is intended to employ the mucilage obtained in this manner either as food or medicine. It may be rendered more or less agreeable by the addition of honey or syrup.

To concentrate in some degree all the medicinal properties of the Iceland moss, a jelly is directed to be formed, by boiling six ounces of the lichen with three quarts of spring water for an hour; press the boiling decoction through a fine hair sieve, and then put it over a slow fire in a jelly bason, and let it evaporate till it is reduced to a pint; then add six ounces of refined sugar, and evaporate the mixture till you have a pound of thick syrup, which, when cold, will assume the consistence of a jelly. Four to six table-spoonsfull of this preparation is to be taken in the course of the day. As this anti-phthisical remedy is pectoral, agglutinent, and demulcent, affording nutriment and support without producing inordinate irritation, it may be usefully employed as an auxiliary to more powerful remedies, especially while the patient is taking, under the direction of skill and prudence, any preparation of the Foxglove.

Some have given the Iceland liverwort, or moss, in the form of a decoction, made by boiling an ounce and a half in a quart of milk, *over a slow fire, exactly one quarter of an hour;* the dose six or eight table spoonsfull, to be taken frequently in the day. If the milk disagree, water may be used in its stead; but care must be taken to boil it over a slow fire, and not more than fifteen minutes. Another medical practitioner directs two ounces of the herb (previously washed in cold water) to be boiled with a little liquorice in a quart of water to a pint and a half: a tea-cup full may be taken three times a day.

The Icelanders and many of the Dutch physicians use this herb in a state of powder, which is prepared by carefully freeing it from the little sticks and green moss that is generally gathered with it; and after being washed in cold water, re-dried in an oven gently heated, so as not to scorch it; then being ground, it must be passed through a fine sieve to deprive it of its fibrous parts, which are insoluble, and devoid of medicinal virtue. This farina may be taken in doses of a

quarter of an ounce or three drachms (two or three large tea spoonsful) boiled with half a pint of pure water or milk, which coincides with its virtues, and so far covers its bitter taste as to render it an agreeable breakfast, and an evening repast.

The real Iceland moss may be had at Mr. LABROW'S, chemist, No. 128, St. John's Street, West Smithfield; of Mr. OGILVY, chemist, No. 147, Minories; and at some other respectable drug warehouses in London. Consumptive patients, who are so situated as to be unable to obtain the genuine plant, may employ the artificial asses' milk, or the decoction of marsh-mallows: an ounce or more of the dried root may be boiled in three pints of water to a quart; half an ounce of liquorice root may be added towards the end of the boiling. The strained liquor may either be drank alone, or used as a vehicle for other medicines; or the decoction may be boiled up with three pounds of fine sugar, and formed into syrup, for obtunding and incrassating acrimonious, thin fluids; in tickling coughs from defluxions on the lungs; in hoarseness; erosions of the stomach, intestines, and urinary organs; lubricating and relaxing the passages in calculous complaints.

Nature has furnished us with another variety of demulcent and mucilaginous vegetables in the Orchis Root, a plant that flourishes in various parts of Asia and Europe, and grows spontaneously and in great abundance in our own country. Salep is said to contain the greatest quantity of nourishment in the smallest bulk; and furnishes a cheap, wholesome, and restorative article of diet. The substance brought from the eastern countries under the name of salep, and recommended, like our orchis root, in bilious dysenteries, defluxions of the breast, consumption, diarrhœa, dysentery, strangury, and dysury, appears to be no other than the prepared roots of plants of the orchis kind: reduced into powder, they soften or dissolve, as it were, in boiling water, into a kind of mucilage, which may be diluted for use with water or milk. Salep retards the acetous fermentation of milk, and is consequently an useful ingredient for milk pottage, &c. especially in and near large towns, where the cows, being frequently fed with sour grains, must yield milk of an acescent quality.

Dr. Bourne has recently published a treatise in recommendation of Uva-Ursi, a plant that, having previously been employed with apparent success in certain disorders, which, like pulmonary consumption, are characterized by hectic fever, Dr. Bourne was induced to direct the powder of Uva Ursi in cases both of genuine consumption and other disorders attended by hectic, in which cases it was attended by a greater or less degree of benefit to the patient, to whom the author mostly exhibited the *uva-ursi* in doses of eight to fifteen grains of the powder three times a-day.

A favourable change, the Doctor observes, generally occurs in the appearance of the urine after the remedy has been taken for a while: it is made in the natural quantity, is of the natural colour, and deposits no more sediment than urine in its healthy state. When the tongue is foul from hectic depending on phthisis, it becomes, if I mistake not (says the author), either comparatively clean, or absolutely so, under

the influence of *uva-ursi*, excepting in deplorably advanced stages of the disease; and in proportion as the tongue becomes clean, there is a return of the proper desire and relish for food.

In the pituitous consumption of the lungs of aged patients, this medicine has proved beneficial; but in some other species of that intractable disease, we do not expect that an astringent which tends to restrain the secretions of morbid mucus from the lungs, can afford to those who are labouring under this malady any lasting relief. For their benefit we have inserted a formula in the Appendix for preparing artificial asses' milk, which may be taken alone, or combined with other medicines.

The common drink of consumptive patients may be either Bristol or Seltzer water, or fresh common whey. The dry vomit is sometimes serviceable; and in all cases of phthisis, suppuration may be prevented or restrained by issues, setons, or open blisters on the chest. Small repeated bleedings, suited to the strength of the patient and the degree of inflammation, are admissible. Good effects rarely attend the use of cinchona in this disease; but the colliquative sweats may be moderated by the use of the diluted vitriolic acid, or the infusion of roses, inserted in the Appendix.

For abating the exacerbations of hectic fever, we have seen the most beneficial effects result from the use of the warm bath, and the exhibition of the Foxglove; these, Dr. Reid has well observed, claim a high rank in the scale of modern improvements. The utility of warm-bathing may perhaps be principally referred to three sources. It affords a grateful, mild, and uniform stimulus; insures cleanliness of the external surface; and preserves a freedom and regularity in cutaneous perspiration. When the tepid bath is employed, during the decided existence of hectic fever in particular, the proper time for immersion is about noon: the temperature of the water must be in a great measure regulated by the sensations and pulse of the patient. As a general rule, an appropriate warmth will be found in the range of 90 to 96 degrees of Fahrenheit's thermometer. The propriety of bathing on successive or alternate days must be determined by the actual and individual experience of the patient.

Foxglove diminishes the frequency of the pulse and the irritability of the system: it increases the action of the absorbent vessels and the discharge by urine; but advantage cannot be expected from an indiscriminate or incautious employment of this delicate and important instrument of medicine. To insure success in the administration of foxglove, great attention must be given to regulate the diet and regimen of the patient. The alvine discharges must be maintained with regularity, to obviate the irritation consequent upon a retention of fæces. Every other artificial source of irritation must likewise be carefully avoided: ardent spirits, particularly in an undiluted form, are for the most part highly injurious. Those articles of food and drink should be resorted to which supply nutriment without inducing any considerable degree of irritation. A milk diet is generally and with propriety recommended. But the caution which, in the early stages of consumption, requires to be most strenuously urged to give

effect to the beneficial operation of the medicine, and to prevent a confirmed consumption, is carefully to *preserve the feet from chill;* to avoid an exposure to sudden and partial variations of the atmosphere; to observe moderation in the indulgence of the appetite and passions; an equable warmth is as much as possible to be preserved; and all irritation, either corporeal or mental, carefully to be avoided.

Ten drops of the tincture of *foxglove* (see the Appendix) may generally be given in the first instance to an adult, which may be repeated, with a very gradual increase, to fifteen drops, two or three times in the course of the day, till the pulse be considerably reduced, or the irritability of the patient be in a great measure subdued.

As every hint that has a tendency to restrain the ravages of this formidable foe to the human race cannot fail to be acceptable to our readers, we must not conclude this subject without informing them, that Dr. Rush, professor of physic in the University of Pennsylvania, mentioned a few years ago, that he had succeeded in curing some cases of phthisis pulmonalis by the use of mercury, so as to excite a salivation. By a late communication from this gentleman, it appears that he continues to experience a great degree of success from the employment of this remedy, which, in the early stages of consumption, he looks upon as almost certain; while it has occasionally succeeded even in those cases that were far advanced: in the latter, however, he finds it difficult to excite salivation.

A NERVOUS CONSUMPTION is a wasting or decay of the whole body without any considerable degree of fever, cough, or difficulty of breathing. It is attended with indigestion, general debility, wasting of the body, and want of appetite.

Those who are of a fretful temper, who indulge in spirituous liquors, or who breathe an unwholesome air, are most liable to this disease.

We would chiefly recommend for the cure of a nervous consumption a light and nourishing diet, plenty of exercise in a free open air, and the use of such bitters as brace and strengthen the stomach; as the Peruvian bark, gentian root, camomile, horehound, &c. These may be infused in water or wine, and a glass of it drank frequently.

It will greatly assist the digestion, and promote the cure of this disease, to take twice a day twenty or thirty drops of the elixir of vitriol in a glass of wine or water. The *wine of iron* (chalybeate wine) is likewise an excellent medicine in this case. It strengthens the solids, and powerfully assists Nature in the preparation of good blood.

Agreeable amusements, cheerful company, and riding about, are however preferable to all medicines in this disease For which reason, when the patient can afford it, we would recommend a long journey of pleasure as the most likely means to restore his health.

What is called a *symptomatic consumption* cannot be cured without first removing the disease by which it is occasioned. Thus, when a consumption proceeds from the scrophula or king's evil, from the scurvy, the asthma, the venereal disease, &c. a due attention must be paid to the malady from whence it arises, and the regimen and medicine directed accordingly.

When *excessive evacuations* of any kind occasion a consumption, the

must not only be restrained, but the patient's strength must be restored by gentle exercise, nourishing diet, and generous cordials. Young and delicate mothers often fall into consumptions, by giving suck too long. As soon as they perceive their strength and appetite begin to fail, they ought immediately to wean the child, or provide another nurse, otherwise they cannot expect a cure.

Before we quit this subject, we would earnestly recommend it to all, as they wish to avoid consumptions, to take as much exercise without doors as they can; to avoid unwholesome air, and to study sobriety. Consumptions owe their present increase not a little to the fashion of sitting up late, eating hot suppers, and spending every evening over a bowl of hot punch or other strong liquors. These liquors, when too freely used, not only hurt the digestion, and spoil the appetite, but heat and inflame the blood, and set the whole constitution on fire.

Among the various domestic medicines which have been employed for the cure of what is called a *nervous atrophy*, we are warranted by experience to add, that few are better calculated to restore an emaciated frame than the salep-root, or meadow-orchis, and the jelly obtained from the red garden-snail. Two drams of the former in powder, boiled in a pint of whey to the consistence of a thick mucilage, ought to be taken twice a-day; and from six to eight of the latter, dissolved over a slow fire in equal quantities of milk and water, with the addition of a little cinnamon and sugar, should be used every morning. If the patient's appetite should be considerably impaired, he may begin with smaller doses: they may be imperceptibly increased, and mixed with the syrup of lemon-juice.

CHAP. XIX.

OF THE SLOW, OR NERVOUS FEVER.

NERVOUS fevers have increased greatly of late years in this island, owing doubtless to our different manner of living, and the increase of sedentary employments; as they commonly attack persons of a weak relaxed habit, who neglect exercise, eat little solid food, study hard, or indulge in spirituous liquors.

CAUSES.——Nervous fevers may be occasioned by whatever depresses the spirits, or impoverishes the blood; as grief, fear, anxiety, want of sleep, intense thought, living on poor watery diet, unripe fruits, cucumbers, melons, mushrooms, &c. They may likewise be occasioned by damp, confined, or unwholesome air. Hence they are very common in rainy seasons, and prove most fatal to those who live in dirty low houses, crowded streets, hospitals, jails, or such-like places.

Persons whose constitutions have been broken by excessive venery, frequent salivations, too free an use of purgative medicines, or any other excessive evacuations, are most liable to this disease.

Keeping on wet clothes, lying on the damp ground, excessive fatigue, and whatever obstructs the perspiration, or causes a spasmodic stricture of the solids, may likewise occasion nervous fevers. We shall

only add, frequent and great irregularities in diet. Too great abstinence, as well as excess, is hurtful. Nothing tends so much to preserve the body in a sound state as a regular diet; nor can any thing contribute more to occasion fevers of the worst kind than its opposite.

SYMPTOMS.——Low spirits, want of appetite, weakness, weariness after motion, watchfulness, deep sighing, and dejection of mind, are generally the forerunners of this disease. These are succeeded by a quick, low pulse, a dry tongue without any considerable thirst, chillness and flushing in turns, &c.

After some time the patient complains of a giddiness and pain of the head, has a nausea, with retchings and vomiting; the pulse is quick, and sometimes intermitting; the urine pale, resembling dead small-beer; and the breathing difficult, with oppression of the breast, and slight alienations of mind.

If towards the ninth, tenth, or twelfth day, the tongue becomes more moist, with a plentiful spitting, a gentle purging, or a moisture upon the skin; or if a suppuration happens in one or both ears, or large pustules break out about the lips and nose, there is reason to hope for a favourable crisis.

But if there is an excessive looseness, or wasting sweats, with frequent fainting fits; if the tongue, when put out, trembles excessively, and the extremities feel cold, with a fluttering or slow creeping pulse; if there is a starting of the tendons, an almost total loss of sight and hearing, and an involuntary discharge by stool and urine, there is great reason to fear that death is approaching.

REGIMEN.——It is very necessary in this disease to keep the patient cool and quiet. The least motion would fatigue him, and will be apt to occasion weariness, and even faintings. His mind ought not only to be kept easy, but soothed and comforted with the hopes of a speedy recovery. Nothing is more hurtful in low fevers of this kind than presenting to the patient's imagination gloomy or frightful ideas. These of themselves often occasion nervous fevers, and it is not to be doubted but they will likewise aggravate them.

The patient must not be kept too low. His strength and spirits ought to be supported by nourishing diet and generous cordials. For this purpose his gruel, panado, or whatever food he takes, must be mixed with wine according as the symptoms may require. Pretty strong wine-whey, or small negus sharpened with the juice of orange or lemon, will be proper for his ordinary drink. *Mustard-whey* is likewise a very proper drink in this fever, and may be rendered an excellent cordial medicine by the addition of a proper quantity of white-wine.

Wine in this disease, if it could be obtained genuine, is almost the only medicine that would be necessary. Good wine possesses all the virtues of the cordial medicines, while it is free from many of their bad qualities. I say good wine; for however common this article of luxury is now become, it is rarely to be obtained genuine, especially by the poor, who are obliged to purchase it in small quantities.

I have often seen patients in low nervous fevers, where the pulse

could hardly be felt, with a constant delirium, coldness of the extremities, and almost every other mortal symptom, recover by using in whey, gruel, and negus, a bottle or two of strong wine every day. Good old sound claret is the best, and may be made into negus, or given by itself, as circumstances require.

In a word, the great aim in this disease is to support the patient's strength, by giving him frequently small quantities of the above, or other drinks of a warm and cordial nature. He is not however to be overheated either with liquor or clothes; and his food ought to be light, and given in small quantities.

MEDICINE.——Where a nausea, load, and sickness at stomach, prevail at the beginning of the fever, it will be necessary to give the patient a gentle vomit. Fifteen or twenty grains of ipecacuanha in fine powder, or a few spoonsfull of the *vomiting julep*, will generally answer this purpose very well. This may be repeated any time before the third or fourth day, if the above symptoms continue. Vomits not only clean the stomach, but, by the general shock which they give, promote the perspiration, and have many other excellent effects in slow fevers, where there are no signs of inflammation, and nature wants rousing.

Such as dare not venture upon a vomit may clean the bowels by a small dose of Turkey rhubarb, or an infusion of senna and manna.

In all fevers, the great point is to regulate the symptoms, so as to prevent them from going to either extreme. Thus, in fevers of the inflammatory kind, where the force of the circulation is too great, or the blood dense, and the fibres too rigid, bleeding and other evacuations are necessary; but in nervous fevers, where nature flags, where the blood is vapid and poor, and the solids relaxed, the lancet must be spared, and wine, with other cordials, plentifully administered.

It is the more necessary to caution people against bleeding in this disease, as there is generally at the beginning an universal stricture upon the vessels, and sometimes an oppression and difficulty of breathing, which suggest the idea of a plethora, or too great a quantity of blood. I have known even some of the faculty deceived by their own feelings in this respect, so far as to insist upon being bled, when it was evident, from the consequences, that the operation was improper.

Though bleeding is generally improper in this disease, yet blistering is highly necessary. Blistering-plasters may be applied at all times of the fever with great advantage. If the patient is delirious, he ought to be blistered on the neck or head; and it will be the safest course, when the insensibility continues, as soon as the discharge occasioned by one blistering-plaster abates, to apply another to some other part of the body, and by that means keep up a continual succession of them till he be out of danger.

I have been more sensible of the advantage of blistering in this than in any other disease. Blistering-plasters not only stimulate the solids to action, but likewise occasion a continual discharge, which may in some measure supply the want of critical evacuations, which seldom happen in this kind of fever. They are most proper, however,

either towards the beginning, or after some degree of stupor has come on, in which last case it will always be proper to blister the head.

If the patient is costive through the course of the disease, it will be necessary to procure a stool, by giving him every other day a clyster of milk and water, with a little sugar, to which may be added a spoonful of common salt, if the above does not operate.

Should a violent looseness come on, it may be checked by small quantities of Venice treacle, or giving the patient for his ordinary drink the compound decoction of chalk, or *chalk mixture.*

A miliary eruption sometimes breaks out about the ninth or tenth day. As eruptions are often critical, great care should be taken not to retard Nature's operation in this particular. The eruption ought neither to be checked by bleeding nor other evacuations, nor pushed out by a hot regimen; but the patient should be supported by gentle cordials, as wine-whey, small negus, sago-gruel with a little wine in it, and such like. He ought not to be kept too warm; yet a kindly breathing sweat should by no means be checked.

Though blistering and the use of cordial liquors are the chief things to be depended on in this kind of fever, yet, for those who may chuse to use them, we shall mention one or two of the forms of medicine which are commonly prescribed in it.

When the patient is low, ten grains of Virginian snake-root, and the same quantity of contrayerva-root, with five grains of Russian castor, all in fine powder, may be made into a bolus with a little of the cordial confection of syrup of saffron. One of these may be taken every four or five hours.

The following powder may be used with the same intention. Take wild Valerian-root in powder one scruple, saffron and castor each four grains. Mix these by rubbing them together in a mortar, and give one, in a cup of wine-whey, three or four times a-day.

In desperate cases, where the hiccup and starting of the tendons have already come on, we have sometimes seen extraordinary effects from large doses of musk frequently repeated. Musk is doubtless an antispasmodic, and may be given to the quantity of a scruple three or four times a-day, or oftener if necessary. Sometimes it may be proper to add to the musk a few grains of camphire and salt of hartshorn, as these tend to promote perspiration and the discharge of urine. Thus fifteen grains of musk, with three grains of camphire, and six grains of salt of hartshorn, may be made into a bolus with a little syrup, and given as above.

If the fever should happen to intermit, which it frequently does towards the decline, or if the patient's strength should be wasted with colliquative sweats, &c. it will be necessary to give him the Peruvian bark. Half a drachm, or a whole drachm, if the stomach will bear it, of the bark in fine powder may be given four or five times a-day in a glass of red port or claret. Should the bark in substance not sit easy on the stomach, an ounce of it in powder may be infused in a bottle of Lisbon or Rhenish wine for two or three days; afterwards it may be strained, and a glass of it taken frequently.

The Peruvian bark may likewise be very properly administered, along with other cordials, in the following manner; Take an ounce

of Peruvian bark, orange-peel half an ounce, Virginian snake-root two drachms, saffron one drachm. Let all of them be powdered, and infused in an English pint of the best brandy for three or four days. Afterwards the liquor may be strained, and two tea-spoonsful of it given three or four times a-day in a glass of small wine or negus.

Some give the bark in this and other fevers, where there are no symptoms of inflammation, without any regard to the remission or intermission of the fever. How far future observations may tend to establish this practice, we will not pretend to say: but we have reason to believe, that the bark is a very universal febrisuge, and that it may be administered with advantage in most fevers where bleeding is not necessary, or where there are no symptoms of topical inflammation.

CHAP. XX.

Of the Malignant, Putrid, or Spotted Fever.

THIS may be called the *pestilential fever* of Europe, as in many of its symptoms it bears a great resemblance to that dreadful disease the plague. Persons of a lax habit, a melancholy disposition, and those whose vigour has been wasted by long fasting, watching, hard labour, excessive venery, frequent salivations, &c. are most liable to it.

CAUSES.——This fever is occasioned by foul air, from a number of people being confined in a narrow place not properly ventilated; from putrid animal and vegetable effluvia, &c. Hence it prevails in camps, jails, hospitals, and infirmaries, especially where such places are too much crowded, and cleanliness is neglected.

A close constitution of the air, with long rainy or foggy weather, likewise occasions putrid fevers. They often succeed great inundations in low and marshy countries, especially when these are preceded or followed by a hot and sultry season.

Living too much upon animal food, without a proper mixture of vegetables, or eating fish or flesh that has been kept too long, are likewise apt to occasion this kind of fever. Hence sailors on long voyages, and the inhabitants of besieged cities, are very often visited with putrid fevers.

Corn that has been greatly damaged by rainy seasons, or long keeping, and water which has become putrid by stagnation, &c. may likewise occasion this fever.

Dead carcasses tainting the air, especially in hot seasons, are very apt to occasion putrid diseases. Hence this kind of fever often prevails in countries which are the scenes of war and bloodshed. This shews the propriety of removing burying-grounds, slaughter-houses, &c. at a proper distance from great towns.

Want of cleanliness is a very general cause of putrid fevers. Hence they prevail amongst the poor inhabitants of large towns, who breathe a confined unwholesome air, and neglect cleanliness. Such mechanics as carry on dirty employments, and are constantly confined within doors, are likewise very liable to this disease.

We shall only add, that putrid, malignant, or spotted fevers, are highly infectious, and are, therefore, often communicated by contagion. For which reason all persons ought to keep at a distance from those affected with such diseases, unless their attendance is absolutely necessary.

SYMPTOMS.——The malignant fever is generally preceded by a remarkable weakness or loss of strength, without any apparent cause. This is sometimes so great, that the patient can scarce walk, or even sit upright, without being in danger of fainting away. His mind too is greatly dejected; he sighs, and is full of dreadful apprehensions.

There is a nausea, and sometimes a vomiting of bile; a violent pain of the head, with a strong pulsation or throbbing of the temporal arteries; the eyes often appear red and inflamed, with a pain at the bottom of the orbit; there is a noise in the ears, the breathing is laborious, and often interrupted with a sigh; the patient complains of a pain about the region of the stomach, and in his back and loins; the tongue is at first white, but afterwards it appears black and chapped; and his teeth are covered with a black crust. He sometimes passes worms both upwards and downwards, is affected with tremors or shaking, and often becomes delirious.

If blood is let, it appears dissolved, or with a very small degree of cohesion, and soon becomes putrid; the stools smell extremely fœtid, and are sometimes of a greenish, black, or reddish cast. Spots of a pale purple, dun, or black colour, often appear upon the skin, and sometimes there are violent hæmorrhages or discharges of blood from the mouth, eyes, nose, &c.

Putrid fevers may be distinguished from the inflammatory, by the smallness of the pulse, the great dejection of mind, the dissolved state of the blood, the petechiæ or purple spots, and the putrid smell of the excrements. They may likewise be distinguished from the low or nervous fever, by the heat and thirst being greater, the urine of a higher colour, and the loss of strength, dejection of mind, and all the other symptoms, more violent.

It sometimes happens, however, that the inflammatory, nervous, and putrid symptoms, are so blended together, as to render it very difficult to determine to which class the fever belongs. In this case the greatest caution and skill are requisite. Attention must be paid to those symptoms which are most prevalent, and both the regimen and medicines adapted to them.

Inflammatory and nervous fevers may be converted into malignant and putrid, by too hot a regimen or improper medicines.

The duration of putrid fevers is extremely uncertain; sometimes they terminate between the seventh and fourteenth day, and at other times they are prolonged for five or six weeks. Their duration depends greatly upon the constitution of the patient, and the manner of treating the disease.

The most favourable symptoms are, a gentle looseness after the fourth or fifth day, with a warm mild sweat. These, when continued for a considerable time, often carry off the fever, and should never

be imprudently stopped. Small miliary pustules appearing between the petechiæ, or purple spots, are likewise favourable, as also hot scabby eruptions about the mouth and nose. It is a good sign when the pulse rises upon the use of wine, or other cordials, and the nervous symptoms abate: deafness coming on towards the decline of the fever, is likewise often a favourable symptom, as are abcesses in the groin or parotid glands; but deafness is not always a favourable symptom in this disease. Perhaps it is only so when occasioned by abscesses formed within the ears.

Among the unfavourable symptoms may be reckoned an excessive looseness, with a hard swelled belly; large black or livid blotches breaking out upon the skin; aphthæ in the mouth; cold clammy sweats; blindness; change of the voice; a wild staring of the eyes; difficulty of swallowing; inability to put out the tongue; and a constant inclination to uncover the breast. When the sweat and saliva are tinged with blood, and the urine is black, or deposits a black sooty sediment, the patient is in great danger. Starting of the tendons, and fœtid, ichorous, and involuntary stools, attended with coldness of the extremities, are generally the forerunners of death.

REGIMEN.——In the treatment of this disease we ought to endeavour as far as possible to counteract the putrid tendency of the humours; to support the patient's strength and spirits; and to assist Nature in expelling the cause of this disease, by gently promoting perspiration and the other evacuations.

It has been observed, that putrid fevers are often occasioned by unwholesome air, and of course they must be aggravated by it. Care should, therefore, be taken to prevent the air from stagnating in the patient's chamber, to keep it cool, and renew it frequently, by opening the doors or windows of some adjacent apartment. The breath and perspiration of persons in perfect health soon render the air of a small apartment noxious; but this will sooner happen from the perspiration and breath of a person whose whole mass of humours are in a putrid state.

Besides the frequent admission of fresh air, we would recommend the use of vinegar, verjuice, juice of lemon, Seville orange, or any kind of vegetable acid that can be most readily obtained. These ought frequently to be sprinkled upon the floor, the bed, and every part of the room. They may also be evaporated with a hot iron, or by boiling, &c. The fresh skins of lemons or oranges ought likewise to be laid in different parts of the room, and they should be frequently held to the patient's nose. The use of acids in this manner would not only prove very refreshing to the patient, but would likewise tend to prevent the infection from spreading among those who attend him. Strong scented herbs, as rue, tansy, rosemary, wormwood, &c. may likewise be laid in different parts of the house, and smelled to by those who go near the patient.

The patient must not only be kept cool, but likewise quiet and easy. The least noise will affect his head, and the smallest fatigue will be apt to make him faint.

Few things are of greater importance in this disease than acids, which ought to be mixed with all the patient's food as well as drink. Orange, lemon, or vinegar-whey, are all very proper, and may be drank by turns, according to the patient's inclination. They may be rendered cordial by the addition of wine in such quantity as the patient's strength seems to require. When he is very low, he may drink negus, with only one half water, and sharpened with the juice of orange or lemon. In some cases a glass of wine may now and then be allowed. The most proper wine is Rhenish; but if the body be open, red port or claret is to be preferred.

When the body is bound a tea-spoonful of the cream of tartar may be put into a cup of the patient's drink, as there is occasion; or he may drink a decoction of tamarinds, which will both quench his thirst, and promote a discharge by stool.

If camomile-tea will sit upon his stomach, it is a very proper drink in this disease. It may be sharpened by adding to every cup of the tea, ten or fifteen drops of the *diluted vitriolic acid.*

The food must be light, as panado, or groat gruel, to which a little wine may be added, if the patient be weak and low; and they ought all to be sharpened with the juice of orange, the jelly of currants, or the like. The patient ought likewise to eat freely of ripe fruits, as roasted apples, currant or goosberry tarts, preserved cherries, or plums, &c.

Taking a little food or drink frequently not only supports the spirits, but counteracts the putrid tendency of the humours; for which reason the patient ought frequently to be sipping small quantities of some of the acid liquors mentioned above, or any that may be more agreeable to his palate, or more readily obtained.

If he is delirious, his feet and hands ought to be frequently fomented with a strong infusion of camomile flowers. This, or an infusion of the bark, to such as can afford it, cannot fail to have a good effect. Fomentations of this kind not only relieve the head, by relaxing the vessels in the extremities; but as their contents are absorbed, and taken into the system, they may assist in preventing the putrescency of the humours.

MEDICINE.——If a vomit be given at the beginning of this fever, it will hardly fail to have a good effect; but if the fever has gone on for some days, and the symptoms are violent, vomits are not quite so safe. The body, however, is always to be kept gently open by clysters or mild laxative medicines.

Bleeding is seldom necessary in putrid fevers. If there be signs of an inflammation, it may sometimes be permitted at the first onset; but the repetition of it generally proves hurtful.

Blistering-plasters are never to be used unless in the greatest extremities. If the petechiæ or spots should suddenly disappear, the patient's pulse sink remarkably, and a delirium, with other bad symptoms, come on, blistering may be permitted. In this case the blistering-plasters are to be applied to the head, and inside of the legs or thighs. But as they are sometimes apt to occasion a gangrene, we would rather recommend warm cataplasms, or poultices of mustard

and vinegar to be applied to the feet, having recourse to blisters only in the utmost extremities.

It is common in the beginning of this fever to give the emetic tartar in small doses, repeated every second or third hour, till it shall either vomit, purge, or throw the patient into a sweat. This practice is very proper, provided it be not pushed so far as to weaken the patient.

A very ridiculous notion has long prevailed of expelling the poisonous matter of malignant diseases by trifling doses of cordial or alexipharmic medicines. In consequence of this notion, the contrayerva-root, the cordial confection, the mithridate, &c. have been extolled as infallible remedies. There is reason, however, to believe, that these seldom do much good. Where cordials are necessary, we know none that is superior to good wine; and therefore again recommend it both as the safest and best. Wine, with acids and antiseptics, are the only things to be relied on in the cure of malignant fevers.

In the most dangerous species of this disease, when it is attended with purple, livid, or black spots, the Peruvian bark must be administered. I have seen it, when joined with acids, prove successful, even in cases where the petechiæ had the most threatening aspect. But to answer this purpose, it must not only be given in large doses, but duly persisted in.

The best method of administering the bark is certainly in substance. An ounce of it in powder may be mixed with half an English pint of water, and the same quantity of red wine, and sharpened with the elixir or the spirit of vitriol, which will both make it sit easier on the stomach, and render it more beneficial. Two or three ounces of the syrup of lemon may be added, and two table-spoonsful of the mixture taken every two hours, or oftener, if the stomach is able to bear it.

Those who cannot take the bark in substance may infuse it in wine, as recommended in the preceding disease.

All drinks in putrid fevers ought to be given cold, because they are then much more tonic.

If there be a violent looseness, the bark must be boiled in red wine with a little cinnamon, and sharpened with the elixir of vitriol, as above. Nothing can be more beneficial in this kind of looseness than plenty of acids, and such things as promote a gentle perspiration.

If the patient be troubled with vomiting, a dram of the salt of wormwood, dissolved in an ounce and a half of fresh lemon-juice, and made into a draught with an ounce of simple cinnamon water, and a bit of sugar, may be given and repeated as often as it is necessary.

As the alimentary canal is the storehouse of putrefaction, the bowels should be cautiously evacuated: that being done, astonishing cures in putrid fevers have been performed by *yeast*. The patients, from being reduced to the last extremity, were in four-and-twenty hours so far restored to health, as to leave not only their beds, but the house also, and to pursue their usual occupations. Two large spoonsful of *yeast* were given in three hours, interposing cinchona (Peruvian

bark), wine, and suitable nutriment. In ten minutes an alteration has been perceived for the better in the pulse, which became more composed and regular. The antiseptic quality of the *yeast*, like that of cinchona, evidently tended to check the progress or putrid fermentation. An infant in the advanced stage of this disease is said to have been recovered in three days, by first vomiting it with the solution of *tartarized antimony* (see Appendix), which quickly acted as an emetic. After the operation was over, the intestines were cleared by rhubarb, and then the child had, every two hours, *yeast* and *water*, with wine and cinchona. In Germany, yeast has lately been considered as a specific against putrid fever; they give six or eight spoonsful of it daily.

If swellings of the glands appear, their suppuration is to be promoted by the application of poultices, ripening cataplasms, &c. And as soon as there is any appearance of matter in them, they ought to be laid open, and the poultices continued.

I have known large ulcerous sores break out in various parts of the body, in the decline of this fever, of a livid gangrenous appearance, and a most putrid cadaverous smell. These gradually healed, and the patient recovered, by the plentiful use of Peruvian bark and wine, sharpened with the vitriolic acid.

For preventing putrid fevers we would recommend a strict regard to cleanliness; a dry situation; sufficient exercise in the open air; wholesome food, and a moderate use of generous liquors. Infection ought above all things to be avoided. No constitution is proof against it. I have known persons seized with a putrid fever, by only making a single visit to a patient in it; others have caught it by lodging for one night in a town where it prevailed; and some by attending the funerals of such as died of it.

When a putrid fever seizes any person in a family, the greatest attention is necessary to prevent the disease from spreading. The sick ought to be placed in a large apartment, as remote from the rest of the family as possible; he ought likewise to be kept extremely clean, and should have fresh air frequently let into his chamber: whatever comes from him should be immediately removed, his linen should be frequently changed, and those in health ought to avoid all unnecessary communication with him.

Any one who is apprehensive of having caught the infection, ought immediately to take a vomit, and to work it off by drinking plentifully of camomile-tea. This may be repeated in a day or two, if the apprehensions still continue, or any unfavourable symptoms appear.

The person ought likewise to take an infusion of the bark and camomile flowers for his ordinary drink; and before he goes to bed, he may drink an English pint of pretty strong negus, or a few glasses of generous wine. I have been frequently obliged to follow this course when malignant fevers prevailed, and have likewise recommended it to others with constant success.

People generally fly to bleeding and purging as antidotes against infections; but these are so far from securing them, that they often, by debilitating the body, increase the danger.

Those who wait upon the sick in putrid fevers, ought always to have a piece of sponge or a handkerchief dipt in vinegar, or juice of lemon, to smell to while near the patient. They ought likewise to wash their hands, and, if possible, to change their clothes, before they go into company.

CHAP. XXI.

OF THE MILIARY FEVER.

THIS fever takes its name from the small pustules or bladders which appear on the skin, resembling, in shape and size, the seeds of millet. The pustules are either red or white, and sometimes both are mixed together.

The whole body is sometimes covered with pustules; but they are generally more numerous where the sweat is most abundant, as on the breast, the back, &c. A gentle sweat, or moisture on the skin, greatly promotes the eruption; but when the skin is dry, the eruption is both more painful and dangerous.

Sometimes this is a primary disease; but it is much oftener only a symptom of some other malady, as the small-pox, measles, ardent, putrid, or nervous fever, &c. In all these cases, it is generally the effect of too hot a regimen or medicines.

The miliary fever chiefly attacks the idle and the phlegmatic, or persons of a relaxed habit. The young and aged are more liable to it than those in the vigour and prime of life. It is likewise more incident to women than men, especially the delicate and the indolent, who, neglecting exercise, keep continually within doors, and live upon weak watery diet. Such females are extremely liable to be seized with this disease in childbed, and often lose their lives by it.

CAUSES.——The miliary fever is sometimes occasioned by violent passions or affections of the mind; as excessive grief, anxiety, thoughtfulness, &c. It may likewise be occasioned by excessive watching, great evacuations, a weak watery diet, rainy seasons, eating too freely of cold, crude, unripe fruits, as plums, cherries, cucumbers, melons, &c. Impure waters, or provisions which have been spoiled by rainy seasons, long keeping, &c. may likewise cause miliary fevers. They may also be occasioned by the stoppage of any customary evacuation, as issues, setons, ulcers, the bleeding piles in men, or the menstrual flux in women.

This disease in childbed-women is sometimes the effect of great costiveness during pregnancy; it may likewise be occasioned by their excessive use of green trash, and other unwholesome things, in which pregnant women are too apt to indulge. But its most general cause is indolence. Such women as lead a sedentary life, especially during pregnancy, and at the same time live grossly, can hardly escape this disease in childbed. Hence it proves extremely fatal to women of fashion, and likewise to those women in manufacturing towns, who, in order to assist their husbands, sit close within doors for al-

most the whole of their time. But among women who are active and laborious, who live in the country, and take sufficient exercise without doors, this disease is very little known.

SYMPTOMS.——When this is a primary disease, it makes its attack, like most other eruptive fevers, with a slight shivering, which is succeeded by heat, loss of strength, faintishness, sighing, a low quick pulse, difficulty of breathing, with great anxiety and oppression of the breast. The patient is restless, and sometimes delirious; the tongue appears white, and the hands shake, with often a burning heat in the palms; and in child-bed-women, the milk generally goes away, and the other discharges stop.

The patient feels an itching or pricking pain under the skin; after which innumerable small pustules of a red or white colour begin to appear. Upon this the symptoms generally abate, the pulse becomes more full and soft, the skin grows moister, and the sweat, as the disease advances, begins to have a peculiar fœtid smell; the great load on the breast, and oppression of the spirits, generally go off, and the customary evacuations gradually return. About the sixth or seventh day from the eruption, the pustules begin to dry and fall off, which occasions a very disagreeable itching in the skin.

It is impossible to ascertain the exact time when the pustules will either appear or go off. They generally come out on the third or fourth day, when the eruption is critical; but, when symptomatical, they may appear at any time of the disease.

Sometimes the pustules appear and vanish by turns. When that is the case there is always danger; but when they go in all of a sudden, and do not appear again, the danger is very great.

In child-bed-women the pustules are commonly at first filled with clear water, afterwards they grow yellowish. Sometimes they are interspersed with pustules of a red colour: when these only appear, the disease goes by the name of a *rash*

REGIMEN.——In all eruptive fevers, of whatever kind, the chief point is to prevent the sudden disappearing of the pustules, and to promote their maturation. For this purpose the patient must be kept in such a temperature, as neither to push out the eruption too fast, nor to cause it to retreat prematurely. The diet and drink ought, therefore, to be in a moderate degree nourishing and cordial; but neither strong nor heating. The patient's chamber ought neither to be kept too hot nor cold; and he should not be too much covered with clothes. Above all, the mind is to be kept easy and cheerful. Nothing so certainly makes an eruption go in as fear, or the apprehension of danger.

The food must be weak chicken-broth with bread, panado, sago, or groat-gruel, &c. to a gill of which may be added a spoonful or two of wine, as the patient's strength requires, with a few grains of salt and a little sugar. Good apples roasted or boiled, with other ripe fruits of an opening cooling nature, may be eaten.

The drink may be suited to the state of the patient's strength and spirits. If these be pretty high, the drink ought to be weak; as water-gruel, balm tea, or the following decoction: Take two ounces of

the shavings of hartshorn, and the same quantity of sarsaparilla; boil them in two English quarts of water. To the strained decoction add a little white sugar, and let the patient take it for his ordinary drink.

When the patient's spirits are low, and the eruption does not rise sufficiently, his drink must be a little more generous; as wine-whey, or small negus, sharpened with the juice of orange or lemon, and made stronger or weaker, as circumstances may require.

Sometimes the miliary fever approaches towards a putrid nature, in which case the patient's strength must be supported with generous cordials, joined with acids; and if the degree of putrescence be great, the Peruvian bark must be administered. If the head be much affected, the body must be kept open by emollient clysters.

In the *Commercium Literarium* for the year 1735, we have the history of an epidemical miliary fever which raged at Strasburgh in the months of November, December, and January; from which we learn the necessity of a temperate regimen in this malady, and likewise that physicians are not always the first who discover the proper treatment of diseases. "This fever made terrible havock even among men of robust constitutions, and all medicine proved in vain. They were seized in an instant with shivering, yawning, stretching, and pains in the back, succeeded by a most intense heat; at the same time there was a great loss of strength and appetite. On the seventh or ninth day the miliary eruptions appeared, or spots like flea-bites, with great anxiety, a delirium, restlessness, and tossing in bed. Bleeding was fatal. While matters were in this unhappy situation, a midwife, of her own accord, gave to a patient, in the height of the disease, a clyster of rain water and butter without salt, and for his ordinary drink a quart of spring water, half a pint of generous wine, the juice of a lemon, and six ounces of the whitest sugar, gently boiled till a scum arose, and this with great success; for the belly was soon loosened, the grievous symptoms vanished, and the patient was restored to his senses, and snatched from the jaws of death." This practice was imitated by others with the like happy effects.

MEDICINE.——If the food and drink be properly regulated, there will be little occasion for medicine in this disease. Should the eruption however not rise, or the spirits flag, it will not only be necessary to support the patient with cordials, but likewise to apply blistering-plasters. The most proper cordial, in this case, is good wine, which may either be taken in the patient's food or drink; and if there be signs of putrescence, the bark and acids may be mixed with wine, as directed in the putrid fever.

Some recommend blistering through the whole course of this disease; and where Nature flags, and the eruption comes and goes, it may be necessary to keep up a stimulus, by a continual succession of small blistering-plasters; but we would not recommend above one at a time. If however the pulse should sink remarkably, the pustules fall in, and the head be affected, it will be necessary to apply several blistering-plasters to the most sensible parts, as the inside of the legs and thighs, &c.

Bleeding is seldom necessary in this disease, and sometimes it does much hurt, as it weakens the patient, and depresses his spirits. It is therefore never to be attempted unless by the advice of a physician. We mention this, because it has been customary to treat this disease in childbed women by plentiful bleeding, and other evacuations, as if it were highly inflammatory. But this practice is generally very unsafe. Patients in this situation bear evacuations very ill. And indeed the disease seems often to be more of a putrid than of an inflammatory nature.

Though this fever is occasioned in childbed-women by too hot a regimen, yet it would be dangerous to leave that off all of a sudden, and have recourse to a very cool regimen, and large evacuations. We have reason to believe that supporting the patient's spirits, and promoting the natural evacuations, is here much safer than to have recourse to artificial ones, as these, by sinking the spirits, seldom fail to increase the danger.

If the disease proves tedious, or the recovery slow, we would recommend the Peruvian bark, which may either be taken in substance, or infused in wine or water, as the patient inclines.

The military fever, like other eruptive diseases, requires gentle purging, which should not be neglected, as soon as the fever is gone off, and the patient's strength will permit.

To prevent this disease, a pure dry air, sufficient exercise, and wholesome food, are necessary. Pregnant women should guard against costiveness, and take daily as much exercise as they can bear, avoid all green trashy fruits, and other unwholesome things; and when in childbed, they ought strictly to observe a cool regimen.

CHAP. XXII.

OF THE REMITTING FEVER.

This fever takes its name from a remission of the symptoms, which happens sometimes sooner and sometimes later, but generally before the eighth day, the remission is commonly preceded by a gentle sweat, after which the patient seems greatly relieved, but in a few hours the fever returns. These remissions return at very irregular periods, and are sometimes of longer and sometimes of shorter duration; the nearer however that the fever approaches to a regular intermittent, the danger is the less.

CAUSES.—Remitting fevers prevail in low marshy countries abounding with wood and stagnating water, but they prove most fatal in places where great heat and moisture are combined, as in some parts of Africa, the province of Bengal in the East Indies, &c. where remitting fevers are generally of a putrid kind, and prove very fatal. They are most frequent in close calm weather, especially after rainy seasons, great inundations or the like. No age, sex or constitution, is exempted from the attack of this fever; but it chiefly seizes persons of a relaxed habit,

who live in low dirty habitations, breathe an impure stagnating air, take little exercise, and use unwholesome diet.

SYMPTOMS.—The first symptoms of this fever are generally yawning, stretching, pain and giddiness in the head, with alternate fits of heat and cold. Sometimes the patient is affected with a delirium at the very first attack. There is a pain and sometimes a swelling about the region of the stomach, the tongue is white, the eyes and skin frequently appear yellow, and the patient is often afflicted with bilious vomitings. The pulse is sometimes a little hard, but seldom full, and the blood when let, rarely shows any signs of inflammation. Some patients are exceedingly costive, and others are afflicted with a very troublesome looseness.

It is impossible to describe all the symptoms of this disease, as they vary according to their situation, the season of the year, and the constitution of the patient. They may likewise be greatly changed by the method of treatment, and by many other circumstances too tedious to mention. Sometimes the bilious symptoms predominate, sometimes the nervous, and at other times the putrid.—Nor is it at all uncommon to find a succession of each of these, or even a complication of them at the same time in the same person.

REGIMEN.—The regimen must be adopted to the prevailing symptoms. When there are any signs of inflammation, the diet must be slender, and the drink weak and diluting. But when nervous or putrid symptoms occur, it will be necessary to support the patient with liquors of a more generous nature, such as are recommended in the immediately preceding fevers. We must however be very cautious in the use of things of a heating quality, as this fever is frequently changed into a *continual* by a hot regimen and improper medicines.

Whatever the symptoms are, the patient ought to be kept cool, quiet and clean. His apartment, if possible, should be large, and frequently ventilated by letting in fresh air at the doors or windows. It ought likewise be sprinkled with vinegar, juice of lemon, or the like. His linen, bed clothes, &c. should be frequently changed, and all his excrements immediately removed. Though these things have been recommended before, we think it necessary to repeat them here, as they are of more importance to the sick than practitioners are apt to imgine. The ingenious Dr. Lind of Edinburgh, in his inaugural dissertation concerning the putrid remitting fever of Bengal, has the following observation; "Indusia, lodices, ac strangula, sæpius sunt mutanda, ac aeri exponenda; fæces sordesque quam primum removendæ; oportet etiam ut loca quibus ægri decumbunt sint salubria, et aceto conspersa; denique ut ægris cura puanta maxima prospiciatur. Compertum ego habeo, medicum hæc sedulo observantem, quique ea exequi potest, multo magis ægris profuturum, quam medicum peritiorem hisce commodis destitutum."

The patient's shirt, bed-clothes, and bedding, ought frequently to be changed, and exposed to the air, and all his excrements immediately removed; the bed-chamber should be well ventilated, and frequently sprinkled with vinegar; in short, every attention should be paid to the patient. I can affirm, that a physician who puts these in practice will

much oftener succeed than one who is even more skilful, but has not the opportunity of using these means."

MEDICINE.—In order to cure this fever, we must endeavour to bring it to a regular intermission. This intention may be promoted by bleeding, if there be any signs of inflammation; but when that is not the case, bleeding ought by no means to be attempted, as it will weaken the patient and prolong the disease. A vomit, however, will seldom be improper, and is in general of great service. Twenty or thirty grains of ipecacuanha, will answer this purpose very well; but where it can be obtained, we would rather recommend a grain or two of tartar emetic, with five or six grains of ipecacuanha, to be made into a draught, and given for a vomit. This may be repeated once or twice at proper intervals, if the sicknesss or nausea continue.

The body ought be kept open either by clysters or by gentle laxatives, as weak infusions of senna and manna, small doses of the lenitive electuary, cream of tartar, tamarinds, stewed prunes or the like; but all strong or drastic purgatives are to be carefully avoided.

By this course the fever in a few days may generally be brought to a pretty regular or distinct intermission, in which case the Peruvian bark may be administered, and it will seldom fail to perfect the cure. It is needless here to repeat the methods of giving the bark, as we have already had occasion frequently to mention them.

The most likely way to avoid this fever is to use a wholesome and nourishing diet, to pay the most scrupulous attention to cleanliness, to keep the body warm, to take sufficient exercise, and in hot countries to avoid damp situations, night air, evening dews, and the like. In countries where it is endemical, the best preventive medicine, which we can recommend, is the Peruvian bark, which may either be chewed, or infused in brandy or wine, &c. Some recommend smoaking tobacco, as very beneficial in marshy countries, both for the prevention of this and intermitting fevers,

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CHAP. XXIII.

OF THE SMALL-POX.

This disease, which originally came from Arabia, is now become so general, that very few escape at it one time of life or other. It is a most contagious malady; and has for many years proved the scourge of Europe.

The small-pox generally appear towards the spring. It is very frequent in summer, less so in autumn, and least of all in winter. Children are most liable to this disease; and those whose food is unwholesome, who want proper exercise, and abound with gross humours, run the greatest hazard from it.

This disease is distinguished into the distinct and confluent kind; the latter of which, is always attended with danger. There are likewise other distinctions of the small-pox; as the crystaline, the bloody, &c.

CAUSES.—The small-pox is commonly caught by infection. Since the disease was first brought into Europe, the infection has never been wholly extinguished, nor have any proper methods, as far as I know been taken for that purpose; so that it has become in a manner constitutional. Children who have over-heated themselves by running, wrestling, &c. or adults after a debauch, are most apt to be seized with the small-pox.

SYMPTOMS.—This disease is so generally known, that a minute description of it is unnecessary. Children commonly look a little dull, seem listless and drowsy for a few days, before the more violent symptoms of the small-pox appear. They are likewise more inclined to drink than usual, have little appetite for solid food, complain of weariness, and upon taking exercise, are apt to sweat.—These are succeeded by slight fits of cold and heat in turns, which, as the time of the eruption approaches, become more violent, and are accompanied with pains of the head and loins, vomiting, &c. The pulse is quick, with a great heat of the skin and restlessness. When the patient drops asleep, he wakes in a kind of horror, with a sudden start, which is a very common symptom of the approaching eruption; as are also convulsion fits in very young children.

About the third or fourth day from the time of sickening, the small-pox generally begins to appear; sometimes indeed they appear sooner, but that is no favourable symptom. At first they very nearly resemble flea-bites, and are soonest discovered on the face, arms and breast.

The most favourable symptoms are a slow eruption, and an abatement of the fever as soon as the pustules appear. In a mild distinct kind of small-pox, the pustules seldom appear before the fourth day from the time of sickening, and they generally keep coming out gradually for several days after. Pustules which are distinct, with a florid red basis, and which fill with thick purulent matter, first of a whitish, and afterward of a yellowish colour, are the best.

A livid brown colour of the pustules is an unfavourable symptom; as also when they are small and flat, with black spots in the middle. Pustules which contain a thin watery ichor are very bad. A great number of pox on the face is always attended with danger. It is likewise a very bad sign, when they run into one another.

It is a most unfavourable symptom, when petechiæ, or purple, brown, or black spots are interspersed among the pustules. These are signs of a putrid dissolution of the blood, and show the danger to be very great. Bloody stools or urine, with a swelled belly, are bad symptoms: as is also a continual strangury. Pale urine and a violent throbbing of the arteries of the neck, are signs of an approaching delirium, or of convulsion fits. When the face does not swell, or falls before the pox comes to maturity, it is very unfavourable. If the face begins to fall about the eleventh or twelfth day, and at the same time, the hands and feet begin to swell, the patient generally does well; but when these do not succeed to each other, there is reason to apprehend danger. When the tongue is covered with a brown crust, it is an unfavourable symptom. Cold shivering fits coming on at the height of the disease, are likewise unfavourable. Grinding of the teeth, when it proceeds

from an affection of the nervous system, is a bad sign; but sometimes it is occasioned by worms, or a disordered stomach.

REGIMEN.—When the first symptoms of the small-pox appear, people are ready to be alarmed, and often fly to the use of medicine, to the great danger of the patient's life. I have known children, to appease the anxiety of their parents, bled, blistered, and purged, during the fever, which preceded the eruption of the small-pox, to such a degree, that Nature was not only disturbed in her operation, but rendered unable to support the pustules after they were out; so that the patient, exhausted by mere evacuations, sunk under the disease.

When convulsions appear, they give a dreadful alarm. Immediately some nostrum is applied, as if this were a primary disease; whereas it is only a symptom, and far from being an unfavourable one, of the approaching eruption. As the fits generally go off before the actual appearance of the small-pox, it is attributed to the medicine, which, by this means acquires a reputation without any merit.

Convulsion fits are no doubt very alarming, but their effects are often salutary. They seem to be one of the means made use of by Nature, for breaking the force of a fever. I have always observed the fever abated, and sometimes quite removed, after one or more convulsion fits. This readily accounts for convulsions being a favourable symptom in the fever, which precedes the eruption of the small-pox, as every thing that mitigates this fever, lessens the eruption.

All that is, generally speaking, necessary during the eruptive fever, is to keep the patient cool and easy, allow him to drink freely of some weak diluting liquors; as balm-tea, barley-water, clear whey, gruels, &c. He should not be confined to bed, but should sit up as much as he is able, and should have his feet and legs frequently bathed in lukewarm water. His food ought to be very light, and he should be as little disturbed with company as possible.

Much mischief is done at this period, by confining the patient too soon to his bed, and plying him with warm cordials or sudorific medicines. Every thing that heats and inflames the blood, increases the fever, and pushes out the pustules prematurely. This has numberless ill effects. It not only increases the number of pustules, but likewise tends to make them run into one another; and when they have been pushed out with too great violence, they generally fall in before they come to maturity.

The good women as soon as they see the small-pox begins to appear, commonly ply their tender charge with cordials, saffron and marigold-teas, wine, punch, and even brandy itself. All these are given with a view, as they term it, to throw out the eruption from the heart. This, like most other popular mistakes, is the abuse of a very just observation, *that when there is a moisture on the skin, the pox rise better and the patient is easier, than when it is dry and parched.* But that is no reason for forcing the patient into a sweat. Sweating never relieves, unless it be spontaneous, or the effect of drinking weak diluting liquors.

Children are often so peevish, that they will not lie a-bed without a nurse constantly by them. Indulging them in this, we have reason to believe, has many bad effects both upon the nurse and child. Even

the natural heat of the nurse cannot fail to augment the fever of the child; but if she too proves feverish, which is often the case, the danger must be increased.

I have known a nurse, who had the small-pox before, so infected by lying constantly a-bed with a child in a bad kind of small-pox, that she had not only a great number of pustules, which broke out all over her body, but afterwards a malignant fever, which terminated in a number of impostumes or biles, and from which she narrowly escaped with her life. We mention this, to put others upon their guard against the danger of this virulent infection.

Laying several children, who have the small pox in the same bed, has many ill consequences. They ought, if possible, never to be in the same chamber, as the perspiration, the heat, the smell, &c. all tend to augment the fever, and to heighten the disease. It is common among the poor, to see two or three children lying in the same bed, with such a load of pustules, that even their skins stick together. One can hardly view a scene of this kind without being sickened by the sight. But how must the effluvia affect the poor patients, many of whom perish by this usage!!

This observation is likewise applicable to hospitals, work-houses, &c. where numbers of children happen to have the small-pox at the same time. I have seen above forty children cooped up in one apartment all the while they had this disease, without any of them being admitted to breathe the fresh air. No one can be at a loss to see the impropriety of such condnct. It ought to be a rule, not only in hospitals for the small-pox, but likewise for other diseases. This is a matter to which too little regard is paid. In most hospitals and infirmaries, the sick, the dying, and the dead, are often to be seen in the same apartment.

A very dirty custom prevails among the lower class of people, of allowing children in the small-pox, to keep on the same linen during the whole period of that loathsome disease. This is done lest they should catch cold; but it has many ill consequences. The linen becomes hard by the moisture which it absorbs, and frets the tender skin. It likewise occasions a bad smell, which is very pernicious, both to the patient and those around him; besides the filth and sores which adhere to the linen being resorbed, or taken up again into the body, greatly augment the disease.

A patient should not be suffered to be dirty in an internal disease, far less in the small-pox. Cutaneous disorders are often occasioned by nastiness alone, and are always increased by it. Were the patient's linen to be changed every day, it would greatly refresh him. Care indeed is to be taken that it be thoroughly dry. It ought likewise to be put on when the patient is most cool.

So strong is the vulgar prejudice in this country, notwithstanding all that has been said against the hot regimen in the small-pox, that numbers still fall a sacrifice to that error. I have seen poor women travelling in the depth of winter, and carrying their children along with them in the small-pox, and have frequently observed others begging by the way-side; with infants in their arms covered with the pustules; yet I could never learn that one of these children died by this sort of treatment. This is cer-

tainly a sufficient proof of the safety at least of exposing patients in the open air. There can be no reason however for exposing the small-pox to public view. It is now very common in the environs of the great towns, to meet patients in the small-pox on the public walks. This practice, however it well may suit the purposes of boasting inoculators, is dangerous to the citizens, and contrary to the laws of humanity and sound policy.

The food in this disease ought to be very light, and of a cooling nature, as panado, or bread boiled with equal quantities of milk and water, good apples roasted or boiled with milk, and sweatened with a little sugar, or such like.

The drink may be equal parts of milk and water, clear sweet whey, barley water or thin gruel, &c. After the pox are full, butter-milk being of an opening and cleansing nature, is a very proper drink.

MEDICINE—This disease is generally divided into four different periods, *viz.* the fever which precedes the eruption, the eruption itself, the suppuration or maturation of the pustules, and the secondary fever.

It has already been observed, that little more is necessary during the primary fever than to keep the patient cool and quiet, allowing him to drink diluting liquors, and bathing his feet frequently in warm water. Though this be generally the safest course that can be taken with infants, yet adults of a strong constitution and plethoric habits sometimes require bleeding. When a full pulse, a dry skin, and other symptoms of inflammation render this operation necessary, it ought to be performed; but unless the symptoms are urgent, it is safer to let it alone; if the body is bound, emollient clysters may be thrown in.

If there is great nausea, or inclination to vomit, weak camomile tea or luke warm water may be drank, in order to clean the stomach. At the beginning of a fever, Nature generally attempts to discharge, either upwards or downwards, which, if promoted by gentle means, would tend greatly to abate the violence of the disease.

Though every method is to be taken during the primary fever, by a cool regimen, &c. to prevent too great an eruption, yet after the pustules have made their appearance, our business is to promote the suppuration by diluting drink, light food, and, if nature seems to flag, by generous cordials. When a low creeping pulse, faintness, and great loss of strength, render cordials necessary, we would recommend good wine, which may be made into negus, with an equal quantity of water, and sharpened with the juice of orange, the jelly of currants, or the like. Wine-whey, sharpened as above, is likewise a proper drink in this case; great care, however, must be taken not to overheat the patient by any of these things. This, instead of promoting, would retard the eruption.

The rising of the small-pox, is often prevented by the violence of the fever; in this case the cool regimen is strictly to be observed. The patient's chamber must not only be kept cool, but he ought likewise frequently to be taken out of bed, and to be lightly covered with clothes while in it.

Excessive restlessness often prevents the rising and filling of the small-pox. When this happens, gentle opiates are necessary. These

however, ought always to be administered with a sparing hand. To an infant, a tea-spoonful of the syrup of poppies may be given every five or six hours till it has the desired effect. An adult will require a table-spoonful in order to answer the same purpose.

If the patient be troubled with a strangury, or suppression of the urine, which often happens in the small-pox, he should be frequently taken out of bed, and if he be able, should walk across the room with his feet bare. When he cannot do this, he may be frequently set on his knees in bed, and should endeavour to pass his urine as often as he can. When these do not succeed, a tea-spoonful of the sweet spirits of nitre may be occasionally mixed with his drink. Nothing more certainly relieves the patient, or is more beneficial in the small-pox, than a plentiful discharge of urine.

If the mouth be foul, and the tongue dry and chapped, it ought to be frequently washed, and the throat gargled with water and honey, sharpened with a little vinegar or currant jelly.

During the rising of the small-pox, it frequently happens, that the patient is eight or ten days without a stool. This not only tends to heat and inflame the blood, but the fæces, by lodging so long in the body, becomes acrid, and even putrid; from whence bad consequences must ensue. It will therefore be proper, when the body is bound, to throw in an emollient clyster every second or third day, through the whole course of the disease. This will greatly cool and relieve the patient.

When the petechtæ, or purple, black, or livid spots appear among the small-pox, the Peruvian bark must immediately be administered in as large a dose as the patient's stomach can bear. For a child, two drachms of the bark in powder may be mixed in three ounces of common water, one ounce of simple cinnamon water, and two ounces of the syrup of orange or lemon. This may be sharpened with the spirits of vitriol, and a table spoonful of it given every hour. If it be given to an adult in the same form, he may take at least three or four spoonfuls every hour. This medicine ought not to be trifled with, but must be administered as frequently as the stomach can bear it; in which case it will often produce very happy effects. I have frequently seen the petechiæ disappear, and the small-pox, which had a very threatening aspect, rise and fill with laudable matter, by the use of the bark and acids.

The patient's drink ought likewise in this case to be generous, as wine or strong negus acidulated with spirits of vitriol, vinegar, the juice of lemon, jelly of currants, or such like. His food must consist of apples roasted or boiled, preserved cherries, plums, and other fruits of an acid nature.

The bark and acids are not only necessary when the petechiæ or putrid symptoms appear, but likewise in the lymphatic or crystalline small-pox, where the matter is thin, and not duly prepared. The Peruvian bark seems to possess a singular power of assisting Nature in preparing laudable pus, or what is called good matter; consequently it must be beneficial both in this and other diseases, where the crisis depends on a suppuration. I have often observed where the small-pox

were flat, and the matter contained in them quite clear and transparent, and where at first they had the appearance of running into one another, that the Peruvian bark, acidulated as above, changed the colour and consistence of the matter, and produced the most happy effects.

When the eruption subsides suddenly, or, as the good women term it, when the small-pox *strike in,* before they have arrived at maturity. the danger is very great. In this case blistering-plasters must be immediately applied to the wrists and ankles, and the patient's spirits supported with cordials.

Sometimes bleeding has a surprising effect in raising the pustules after they have subsided; but it requires skill to know when this is proper, or to what length the patient can bear it. Sharp cataplasms however may be applied to the feet and hands, as they tend to promote the swelling of these parts, and by that means to draw the humours towards the extremities.

The most dangerous period of this disease is what we call the secondary fever. This generally comes on when the small-pox begin to blacken, or turn on the face; and most of those who die of the small-pox are carried off by this fever.

Nature generally attempts, at the turn of the small-pox, to relieve the patient by loose stools. Her endeavours this way are by no means to be counteracted, but promoted, and the patient at the same time supported by food and drink of a nourishing and cordial nature.

If at the approach of the secondary fever the pulse be very quick, hard, and strong, the heat intense, and the breathing laborious, with other symptoms of an inflammation in the breast, the patient must immediately be bled. The quantity of blood to be let must be regulated by the patient's strength, age, and the urgency of the symptoms.

But in the secondary fever, if the patient be faintish, the pustules become suddenly pale, and if there be great coldness of the extremities, blistering-plasters must be applied, and the patient must be supported with generous cordials. Wine, and even spirits have sometimes been given in such cases with amazing success.

As the secondary fever is in a great measure, if not wholly, owing to the absorption of the matter, it would seem highly consonant to reason, that the pustules, as soon as they come to maturity, should be opened. This is every day practised in other phlegmons which tend to suppuration; and there seems to be no cause why it should be less proper here. On the contrary, we have reason to believe that by this means the secondary fever might always be lessened, and often wholly prevented.

The pustules should be opened when they begin to turn of a yellow colour. Very little art is necessary for this operation. They may either be opened with a lancet or a needle, and the matter absorbed by a little dry lint. As the pustules are generally first ripe on the face, it will be proper to begin with opening these, and the others in course as they become ripe. The pustules generally fill again, a

second or even a third time: for which cause the operation must be repeated, or rather continued as long as there is any considerable appearance of matter in the pustules.

We have reason to believe that this operation, rational as it is, has been neglected from a piece of mistaken tenderness in parents. They believe that it must give great pain to the poor child; and therefore would rather see it die than have it thus tortured. This notion however is entirely without foundation. I have frequently opened the pustules when the patient did not see me, without his being in the least sensible of it; but suppose it were attended with a little pain, that is nothing in comparison to the advantages which arise from it.

Opening the pustules not only prevents the resorption of the matter into the blood, but likewise takes off the tension of the skin, and by that means greatly relieves the patient. It likewise tends to prevent the pitting, which is a matter of no small importance. Acrid matter, by lodging long in the pustules, cannot fail to corrode the tender skin, by which many a handsome face becomes so deformed as hardly to bear a resemblance to the human figure.

Though this operation can never do harm, yet it is only necessary when the patient has a great load of small-pox, or when the matter which they contain is of so thin and acrid a nature, that there is reason to apprehend bad consequences from its being too quickly absorbed, or taken up again into the mass of circulating humours.

It is generally necessary, after the small-pox are gone off, to purge the patient. If however the body has been open through the whole course of the disease, or if butter-milk and other things of an opening nature have been drank freely after the height of the small-pox, purging becomes less necessary: but it ought never wholly to be neglected.

For very young children, an infusion of senna and prunes, with a little rhubarb, may be sweetened with coarse sugar, and given in small quantities till it operates. Those who are farther advanced must take medicines of a sharper nature. For example, a child of five or six years of age may take eight or ten grains of fine rhubarb in powder over night, and the same quantity of jalap in powder next morning. This may be wrought off with fresh broth or water-gruel, and may be repeated three or four times, five or six days intervening between each dose. For children further advanced, and adults, the dose must be increased in proportion to the age and constitution; or at bed time give one, two, three, or four grains of calomel, according to the age of the patient: repeat this medicine four or five times at intervals of three or four days, and if necessary, a suitable dose of powdered jalap or rhubarb may be given in the morning.

When imposthumes happen after the small-pox, which is not seldom the case, they must be brought to suppuration as soon as possible, by means of ripening poultices; and when they have been opened, or have broke of their own accord, the patient must be purged. The Peruvian bark and a milk diet will likewise be useful in this case.

When a cough, a difficulty of breathing, or other symptoms of a

consumption, succeed to the small-pox, the patient must be sent to a place where the air is good, and put upon a course of asses milk, with such exercise as he can bear. For further directions in this case, see the article *Consumptions*.

OF INOCULATION

Though no disease, after it is formed, baffles the powers of medicine more effectually than the small-pox, yet more may be done beforehand to render this disease favourable than any one we know, as almost all the danger from it may be prevented by inoculation. This salutary invention has been known in Europe above half a century; but, like most other useful discoveries, it has till of late made but slow progress. It must however be acknowledged, to the honour of this country, that inoculation has met with a more favourable reception here, than among any of our neighbours. It is still however far from being general, which we have reason to fear will be the case, as long as the practice continues in the hands of the faculty.

No discovery can be of general utility, while the practice of it is kept in the hands of a few. Had the inoculation of the small-pox been introduced as a fashion, and not as a medical discovery, or had it been practised by the the same kind of operators here as it is in those countries from whence we learned it, it had long ago been universal. The fears, the jealousies, the prejudices, and the opposite interests of the faculty, are, and ever will be, the most effectual obstacles to the progress of any salutary discovery. Hence it is that the practice of inoculation never became in any measure general, even in England, till taken up by men not bred to physic. These have not only rendered the practice more extensive, but likewise more safe; and by acting under less restraint than the regular practitioners, have taught them that the patient's greatest danger arose, not from the want of care, but from the excess of it.

Common sense and prudence alone are sufficient both in the choice of the subject and management of the operation. Whoever is possessed of these, may perform this office for his children whenever he finds it convenient, *provided they be in a good state of health.*

This statement is not the result of theory, but of observation. Though few physicians have had more opportunities of trying inoculation in all its different forms, so little appears to me to depend on those generally reckoned important circumstances, of preparing the body, communicating the infection by this or the other method, &c. that for several years past I have persuaded the parents or nurses to perform the whole themselves, and have found that method followed with equal success, while it is free from many inconveniencies that attend the other.

A critical situation, too often to be met with, first put me upon trying this method. A gentleman who had lost all his children except one son by the natural small-pox, was determined to have him inoculated. He told me his intention, and desired I would persuade the mother and grandmother, &c. of its propriety. But that was impossible. They were not to be persuaded, and either could not get

the better of their fears, or were determined against conviction. It was always a point with me not to perform the operation without the consent of the parties concerned. I therefore advised the father, after giving his son a dose or two of rhubarb, to go to a patient who had the small-pox of a good kind, to open two or three of the pustules, taking up the matter with a little cotton, and as soon as he came home, to take his son apart, and give his arm a slight scratch with a pin, afterwards to rub the place well with the cotton, and take no farther notice of it. All this he punctually performed: and at the usual period the small-pox made their appearance, which were of an exceeding good kind, and so mild as not to confine the boy an hour to his bed. None of the other relations knew but the disease had come in the natural way, till the boy was well.

The small-pox may be communicated in a great variety of ways with nearly the same degree of safety and success. In Turkey, from whence we learned the practice, the women communicate the disease to children, by opening a bit of the skin with a needle, and putting into the wound a little matter taken from a ripe pustule. On the coast of Barbary they pass a thread wet with the matter through the skin between the thumb and fore-finger; and in some of the states of Barbary, inoculation is performed by rubbing in the variolous matter between the thumb and fore-finger, or on other parts of the body. The practice of communicating the small-pox, by rubbing the variolous matter upon the skin, has been long known in many parts of Asia and Europe as well as in Barbary, and has generally gone by the name of *buying the small-pox*.

The present method of inoculating in Britain is to make two or three slanting incisions in the arm, so superficial as not to pierce quite through the skin, with a lancet wet with fresh matter taken from a ripe pustule; afterwards the wounds are closed up, and left without any dressing. Some make use of a lancet covered with the dry matter; but this is less certain, and ought never to be used unless where fresh matter cannot be obtained: when this is the case, the matter ought to be moistened by holding the lancet for some time in the steam of warm water.

Indeed, if fresh matter be applied long enough to the skin, there is no occasion for any wound at all. Let a bit of thread, about half an inch long, wet with the matter, be immediately applied to the arm, midway between the shoulder and the elbow, and covered with a piece of the common sticking-plaster, and kept on for eight or ten days. This will seldom fail to communicate the disease. We mention this method because many people are afraid of a wound: and doubtless the more easily the operation can be performed, it has the greater chance to become general. Some people imagine, that the discharge from a wound lessens the eruption; but there is no great stress to be laid upon this notion; besides, deep wounds often ulcerate and become troublesome.

We do not find that inoculation is at all considered as a medical operation in those countries from whence we learned it. In Turkey it is performed by the women, and in the East Indies by the Brach-

mins or priests. In this country the custom is still in its infancy; we make no doubt, however, but it will soon become so familiar, that parents will think no more of inoculating their children than at present they do of giving them a purge.

No set of men have it so much in their power to render the practice of inoculation general as the clergy, the greatest opposition to it still arising from some scruples of conscience, which they alone can remove. I would recommend it to them not only to endeavour to remove the religious objections which weak minds may have to this salutary practice, but to enjoin it as a duty, and to point out the danger of neglecting to make use of a mean which Providence has put in our power for saving the lives of our offspring. Surely, such parents as wilfully neglect the means of saving their children's lives, are as guilty as those who put them to death. I wish this matter were duly weighed. No one is more ready to make allowance for human weakness and religious prejudices; yet I cannot help recommending it, in the warmest manner, to parents, to consider how great an injury they do their children, by neglecting to give them this disease in the early period of life.

The numerous advantages arising from the inoculation of the small-pox, have been pretty fully pointed out by the learned Dr. M'Kenzie, in his History of Health. "Many and great," says this humane author, "are the dangers attending the natural infection, from all which the inoculation is quite secure. The natural infection may invade weak or distempered bodies, by no means disposed for its kindly reception. It may attack them at a season of the year either violently hot or intensely cold. It may be communicated from a sort of small-pox impregnated with the utmost virulence. It may lay hold upon people unexpectedly, when a dangerous sort is imprudently imported into a maritime place. It may surprise us soon after excesses committed in luxury, intemperance, or lewdness. It may likewise seize on the innocent after indispensable watchings, hard labour, or necessary journies. And is it a trivial advantage, that all these unhappy circumstances can be prevented by inoculation? By inoculation numbers are saved from deformity as well as from death. In the natural small-pox how often are the finest features, and the most beautiful complexions, miserably disfigured? Whereas inoculation rarely leaves any ugly marks or scars, even where the number of pustules on the face have been very considerable, and the symptoms by no means favourable. And many other grievous complaints that are frequently subsequent to the natural sort, seldom follow the artificial. Does not inoculation also prevent those inexpressible terrors that perpetually harrass persons who never had this disease, insomuch that when the small-pox is epidemical, entire villages are depopulated, markets ruined, and the face of distress spread over the whole country? From this terror it arises, that justice is frequently postponed, or discouraged, at sessions or assizes where the small-pox rages. Witnesses and juries dare not appear; and by reason of the necessary absence of some gentlemen, our honourable and useful judges are not attended with that rever-

ence and splendour due to their office and merit. Does not inoculationl, in like manner, prevent our brave sailors from being seized with this distemper on shipboard, where they must quickly spread the infection among such of the crew who never had it before, and where they have scarce any chance to escape, being half stifled with the closeness of their cabins, and but very indifferently nursed? Lastly, with regard to the soldiery, the miseries attending these poor creatures, when attacked by the small-pox on a march, are inconceivable, without attendance, without lodgings, without any accommodation; so that one out of three commonly perishes." To these mentioned by the Doctor we shall only add, that such as have not had the small-pox in the early period of life, are not only rendered unhappy, but likewise in a great measure unfit for sustaining many of the most useful and important offices. Few people would chuse even to hire a servant who had not had the small-pox, far less to purchase a slave, who had the chance of dying of this disease. How could a physician or a surgeon, who had never had the small-pox himself, attend others under that malady? How deplorable is the situation of females, who arrive at mature age without having had the small-pox! A woman with child seldom survives this disease: and if an infant happen to be seized with the small-pox upon the mother's breast, who has not had the disease herself, the scene must be distressing! If she continue to suckle the child, it is at the peril of her own life; and if she wean it, in all probability it will perish. How often is the affectionate mother forced to leave her house, and abandon her children at the very time when her care is most necessary! Yet, should parental affection get the better of her fears, the consequences would often prove fatal. I have known the tender mother and her sucking infant laid in the same grave, both untimely victims to this dreadful malady. But these scenes are too shocking even to mention. Let parents who run away with their children to avoid the small-pox, or who refuse to inoculate them in infancy, consider to what deplorable situations they may be reduced by this mistaken tenderness.

As the small-pox is now become an epidemical disease in most parts of the known world, no other choice remains but to render the malady as mild as possible. This is the only manner of extirpation now left in our power; and though it may seem paradoxical, the artificial method of communicating the disease, could it be rendered universal, would amount to nearly the same thing as rooting it out. It is a matter of small consequence, whether a disease be entirely extirpated, or rendered so mild as neither to destroy life nor hurt the constitution; but that this may be done by inoculation, does not now admit of a doubt. The numbers who die under inoculation hardly deserve to be named. In the natural way, one in four or five generally dies; but by inoculation not one of a thousand. Nay, some can boast of having inoculated ten thousand without the loss of a single patient.

I have often wished to see some plan established for rendering this salutary practice universal: but am afraid I never shall be so

happy. The difficulties indeed are many; yet the thing is by no means impracticable. The aim is great: no less than saving the lives of one fourth part of mankind. What ought not to be attempted in order to accomplish so desirable an end?

The first step towards rendering the practice universal, must be to remove the religious prejudices against it. This, as already observed, can only be done by the clergy. They must not only recommend it as a duty to others, but likewise practice it on their own children. Example will ever have more influence than precept.

The next thing requisite is to put it in the power of all. For this purpose we would recommend it to the Faculty to inoculate the children of the poor *gratis*. It is hard that so useful a part of mankind should, by their poverty, be excluded from such a benefit.

Should this fail, it is surely in the power of any State, to render the practice general, at least as far as their dominion extends. We do not mean that it ought to be enforced by a law. The best way to promote it would be to employ a sufficient number of operators at the public expence to inoculate the children of the poor. This would only be necessary till the practice became general; afterwards custom, the strongest of all laws, would oblige every individual to inoculate his children to prevent reflections.

It may be objected to this scheme, that the poor would refuse to employ the inoculators: this difficulty is easily removed. A small premium to enable mothers to attend their children while under the disease, would be a sufficient inducement; besides, the success attending the operation would soon banish all objections to it. Even considerations of profit would induce the poor to embrace this plan. They often bring up their children to the age of ten or twelve, and when they come to be useful, they are snatched away by this malady, to the great loss of their parents, and detriment of the public.

The British legislature has of late years shewn great attention to the preservation of infant lives, by supporting the Foundling Hospital, &c. But we will venture to say, if one tenth part of the sums laid out in supporting that institution had been bestowed towards promoting the practice of inoculation of the small-pox among the poor, that not only more useful lives had been saved, but the practice, ere now, rendered quite universal in this island. It is not to be imagined what effect example and a little money will have upon the poor; yet, if left to themselves, they would go on for ever in the old way, without thinking of any improvement. We only mean this as a hint to the humane and public-spirited. Should such a scheme be approved, a proper plan might be easily laid down for the execution of it. But as public plans are very difficult to bring about, and often, by the selfish views and misconduct of those entrusted with the execution of them, fail of answering the noble purposes for which they were designed, we shall therefore point out some other method by which the benefits of inoculation may be extended to the poor.

There is no doubt but inoculators will daily become more numerous. We would therefore have every parish in Britain to allow one

of them a small annual salary for inoculating all the children of the parish at a proper age. This might be done at a very trifling expence, and it would enable every one to enjoy the benefit of this salutary invention.

Two things chiefly operate to prevent the progress of inoculation. The one is a wish to put the evil day as far off as possible. This is a principle in our nature; and as inoculation seems rather to be anticipating a future evil, it is no wonder mankind are so averse to it. But this objection is sufficiently answered by the success. Who in his senses would not prefer a lesser evil to-day to a greater to-morrow, provided they were equally certain!

The other obstacle is the fear of reflections. This has a very great weight with the bulk of mankind. Should the child die, they think the world would blame them. This they cannot bear. Here lies the difficulty; and, till that be removed, inoculation will make but small progress. Nothing, however, can remove it but custom. Make the practice fashionable, and all objections will soon vanish. It is fashion alone that has led the multitude since the beginning of the world, and will lead them to the end. We must therefore call upon the more enlightened part of mankind to set a pattern to the rest. Their example, though it may for some time meet with opposition, will at length prevail.

I am aware of an objection to this practice from the expence with which it may be attended! this is easily obviated. We do not mean that every parish ought to employ a Sutton or a Dimsdale as inoculators. These have by their success already recommended themselves to crowned heads, and are beyond the vulgar reach; but have not others an equal chance to succeed? They certainly have. Let them make the same trial, and the difficulties will soon vanish. There is not a parish, and hardly a village in Britain, destitute of some person who can bleed. But this is a far more difficult operation, and requires both more skill and dexterity than inoculation.

The persons to whom we would chiefly recommend the performance of this operation are the clergy. Most of them know something of medicine. Almost all of them bleed, and can order a purge, which are all the qualifications necessary for the practice of inoculation. The priests among the less enlightened Indians perform this office, and why should a christian teacher think himself above it? Surely the bodies of men, as well as their souls, merit a part of the pastor's care; at least the greatest Teacher who ever appeared among men seems to have thought so.

Should all other methods fail, we would recommend it to parents to perform the operation themselves. Let them take any method of communicating the disease they please; provided the subjects be healthy and of a proper age, they will seldom fail to succeed to their wish. I have known many instances even of mothers performing the operation, and never so much as heard of one bad consequence. A planter in one of the West India islands is said to have inoculated, with his own hand, in one year, three hundred of his slaves, who, notwithstanding the warmth of the climate, and other unfavourable

circumstances, all did well. Common mechanics have often, to my knowledge, performed the operation, with as good success as physicians. We do not, however, mean to discourage those who have it in their power from employing people of skill to inoculate their children, and attend them when under the disease; but only to shew, that where such cannot be had, the operation ought not upon that account to be neglected.

Instead of multiplying arguments to recommend this practice, I shall just beg leave to mention the method which I took with my own son, then an only child. After giving him two gentle purges, I ordered the nurse to take a bit of thread which had been previously wet with fresh matter from a pock, and to lay it upon his arm, covering it with a piece of sticking plaster. This remained on six or seven days, till it was rubbed off by accident. At the usual time the small-pox made their appearance, and were exceedingly favourable. Surely this, which is all that is generally necessary, may be done without any skill in medicine.

We have been the more full on this subject, because the benefits of inoculation cannot be extended to society by any other means than making the practice general. While it is confined to a few, it must prove hurtful to the whole. By means of it the contagion is spread, and is communicated to many who might otherwise never have had the disease. Accordingly it is found that nearly the same number die of the small-pox now as before inoculation was introduced; and this important discovery, by which alone more lives might be saved than by all the endeavours of the faculty, is in a great measure lost by its benefits not being extended to the whole community. Yet by a well-concerted plan for extending *vaccine* inoculation, more lives might be saved at a small expence, than are at present preserved by all the hospitals in England, which cost the public such an amazing sum.

The spring and autumn have been usually reckoned the most proper seasons for inoculation, on account of the weather being then most temperate; but it ought to be considered that these are generally the most unhealthy seasons of the whole year. Undoubtedly the best preparation for the disease is a previous good state of health. I have always observed that children in particular are more sickly towards the end of spring and autumn than at any other time of the year. On this account, as well as for the advantage of cool air, I would propose winter as the most proper season for inoculation; though, on every other consideration, the spring would seem to be preferable.

The most proper age for inoculation is between three and five. Many approve of inoculation on the breast, and where no circumstances forbid this practice, I have no objection to it; for when the fibres begin to grow rigid, and children make use of grosser food, the small-pox become more dangerous.

Children who have constitutional diseases must nevertheless be inoculated. It will often mend the habit of body; but ought to be

performed at a time when they are most healthy. Accidental disease should always be removed before inoculation.

It is generally thought necessary to regulate the diet for some time before the disease be communicated. In children, however, great alteration in diet is seldom necessary, their food being commonly of the most simple and wholesome kind, as milk, water-pap, weak broths, bread, light puddings, mild roots, and white meats.

But children who have been accustomed to a richer diet, who are of a gross habit, or abound with bad humours, ought to be put upon a spare diet before they are inoculated. Their food should be of a light cooling nature, and their drink whey, butter-milk, &c.

We would recommend no other medicinal preparation but two or three mild purges, which ought to be suited to the age and strength of the patient. The success of inoculators does not depend *so much* on the preparation of their patients, as on their management of them while under the disease. Their constant care is to keep them cool, and their bodies gently open, by which means the fever is kept low, and the eruption greatly lessened. The danger is seldom great when the pustules are few; and their number is generally in proportion to the fever which precedes and attends the eruption. Hence the chief secret of inoculation consists in regulating the eruptive fever, which generally may be kept sufficiently low by the methods mentioned above.

The regimen during the disease is in all respects the same as under the natural small-pox. The patient must be kept cool, his diet should be light, and his drink weak and diluting, &c. Should any bad symptoms appear, which is seldom the case, they must be treated in the same way as directed in the natural small-pox. Purging is not less necessary afer the small-pox by inoculation than in the natural way, and ought by no means to be neglected.

In every stage of the small-pox, animal food should be avoided.

The CHICKEN-POX and SWINE-POX differ so little from each other, and are attended with so little danger, or difficulty of cure, that it is not necessary to treat of them separately. The only material distinction between these two diseases is, that the pimples or pustules of the latter are frequently of a larger size than the former, but this is not always the case. The chicken-pox, like the small-pox, seems to depend upon a specific contagion. Persons who have had the small pox may have the chicken-pox; but those who have had the chicken-pox are as rarely affected again by it, as by the small-pox; but to those persons who never had the chicken-pox, it is as infectious a distemper as the small-pox.

The symptoms which generally precede the chicken-pox resemble those of the small-pox, but they are much less violent and of shorter duration. The eruption is frequently preceded by chilliness, succeeded by flushing heats: thirst, restlessness, a quick pulse, pains in the head and back, loss of appetite, and aversion to exercise, are followed by the appearance of the eruption in little more than twenty-

four hours from the first indisposition. The pustules first appear red in the skin, but soon rise, become prominent, and fill with a watery fluid instead of matter. Were it not for this difference, these disorders so near resemble the small-pox, that the chicken-pox has frequently been mistaken for that disease: a mistake that has been productive of very fatal consequences, both in case of inoculating from them, and by inspiring the patient with a belief that he has had the small-pox, putting him off his guard, and leaving him exposed to take the infection in the natural way, at seasons and under circumstances which may occasion extreme inconvenience and danger.

On the second or at farthest on the third day from the eruption, as many of those pocks as are not broken, seem arrived at their full maturity, and those which are fullest of that yellow liquor very much resemble what the genuine small-pox are on the fifth or sixth day.

The disease as above described seldom stands in need of any remedies; but sometimes it appears in a more malignant form. For three or four days, all the symptoms which precede the eruption run much higher. On the fourth or fifth day the eruption appears, with very little abatement of the fever. The pains likewise of the back and loins continue, which are also accompanied with pains of the gums. The pocks are redder than the common chicken-pox, and hardly rise so high, at least not in proportion to their size, but go off in the same manner.

In this disease, if the feverish symptoms run high, they must be treated in the same manner as the small-pox under similar circumstances; but in general it is only necessary to use a spare regimen under the first appearance of the eruption, and to give one, two, or three cooling purgatives afterwards.

OF THE VACCINE OR COW-POX.

One of the most remarkable and important phenomena in the history of animal nature, is the *cow-pox*. This malady appears on the nipples of cows in the form of pustules. Its power to prevent infection of the small-pox was noticed in a periodical work published by Mr. Steinbeck, at Gottingen, in the year 1769; and Dr. Barry, of Cork, has asserted, in a letter to Dr. Pearson of Leicester-Square, London, that the cow-pox has been known in Ireland from time immemorial; in the neighbourhood of Cork it has been called *Shinagh*, a term which belongs to the ancient language of the country. This disorder is known in most of the counties in England; in Gloucestershire in particular, it has been long supposed that those persons who had received the cow-pox were thereby rendered secure against the small-pox.

In the year 1798, Dr. Jenner, who had long resided in the county of Gloucester, published observations on the nature and properties of this disease, which, by the active assistance of Dr. Pearson and the late Dr. Woodville, soon attracted a considerable degree of the public attention; for the *late* Dr. Buchan had justly and long before

observed, that "The benefits of inoculation" (of the small-pox) "cannot be extended to society by any other means than making the practice general. While it is confined to a few, it must prove hurtful to the whole. By means of inoculation the contagion is spread, and is communicated to many who might otherwise never have had the disease. Accordingly it is found, that nearly the same number" (nay more) "die of the small-pox now, than before the practice of inoculation was introduced."

A multitude of proofs might be adduced of the justice of our author's assertions, and of the necessity of legislative interference in this momentous business; but our limits confine us to the following extract, from the monthly report of the prevailing diseases in a particular part of London by an eminent physician.

"I cannot here pass over a striking instance of the bad effects arising from partial inoculation. A child was inoculated in April whose parents kept a shop in a court consisting of about twenty houses. As the inhabitants repaired every day for necessary articles to the source of infection, the consequence was, that sixteen of them were affected with the small-pox in the natural way within a fortnight after the child's recovery, and four of them died of the disease.——*Vide Monthly Mag. May* 1796, *p.* 326.

Having had occasion to regret many similar instances of the havock made by this loathsome and destructive distemper, we read with much satisfaction, which however was not unalloyed by a considerable portion of distrust, Dr. Jenner's account of the advantages of the cow-pox inoculation over that of the small-pox. They are represented by this author to be, 1. Its uniform mildness; that of two thousand persons inoculated with the cow-pox, not one died, and therefore may be practised at all ages with safety.—2. That it is not communicable by effluvia, and therefore any part of the family may be infected without affecting the rest.—3. It does not disfigure the skin.—4. Requiring no medical attendance, it may be practised by any intelligent person; and, lastly, Persons who have once been affected with the cow-pox are thereby rendered incapable of variolous infection.

It was not, however, until we had seen several hundred patients inoculated; until, as far as circumstances would possibly permit, we had traced the effect of the cow-pox; it was not until we were assured by the late Dr. Woodville (whom we had known longer than any governor of the Small-pox Hospital, and whose experience on this subject carries the highest authority); it was not until Dr. W. assured us that he had communicated the vaccine disease to upwards of a thousand persons, who had afterwards been inoculated with variolous matter, and of whom *none* took the small-pox; it was not before this, that we recommended, as we now conscientiously do, the practice of vaccination.

The adversaries to that practice not only deny the mildness of this disease, and that it prevents the small-pox, but assert that it is dangerous and sometimes fatal. But the anti-vaccinists in general substitute fictions for facts, and irony for argument: such was the

disingenuous practice of a late ingenious, indefatigable, eccentric physician. When he was examined by a committee of the House of Commons, he spoke in disparagement of the cow-pock inoculation, and referred to a conversation to that effect with Professor Wall, at Oxford: the accuracy of that statement was afterwards contradicted by Dr. Wall, in a letter addressed to the chairman of the Committee.

Dr. Rowley having been sworn, said, "He saw two children at the Mary-le-bonne Infirmary in the small-pox, whose father informed him these children had been inoculated with the cow-pox in the preceding autumn. He did not examine the arms of the children where the cow-pox inoculation was said to have taken place. He had not seen many cases of spurious cow-pox; he has seen ulcers succeed in the beginning of vaccine inoculation, but that has been entirely obviated by the subsequent practice: he does not know by what change in the practice these disastrous circumstances are now prevented; he has seen symptoms of a *worse* nature arise after small-pox inoculation, particularly scrophula; and abscesses, which have appeared in different parts, and at last proved fatal." Nevertheless the doctor renewed his attack on vaccine inoculation, by publishing a random collection of cases of its morbid tendency; and to the great terror of some, and the astonishment of others, he asserted the probability of children having ox-like countenances in consequence of being inoculated with the cow-pock. Is it not *passing strange*, that such a preposterous assertion should excite any sensation but contempt? As well might the lovers of mutton expect nature to invest their bodies with *fleecy hosiery;* as well may the lovers of milk, or ox-beef, or venison, live in dread of having their brows burthened with horns or crowned with antlers! Yet such has been the pernicious effect of Dr. R.'s inconsistent and fallacious reasonings, that the parents of many hundred children, who have lately fallen victims to the small-pox in the capital, were deterred from securing their offspring from the deadly contagion by means of vaccination, of which not one in a thousand have died in any quarter of the globe.

Authors who are bent on displaying their wit, physicians who are determined to render themselves notorious by the singularity of their opinions on subjects that are intimately connected with the health and welfare of the people, would do well, before they *mount their hobbies*, to consider the notice given in the ninth chapter of Genesis: "Surely at the hand of man, at the hand of every man's brother, will I require the life of man."

The grand objection to the cow-pock inoculation seems to be, that it does not universally, and without exception, produce the effect it is intended to produce; that is, that it does not in all cases, and without exception, prevent the infection by natural or inoculated small-pox. Granting that there may have been even well authenticated instances of persons vaccinated in a *proper manner* having notwithstanding yielded to the other infection; granting all this, we say, it is no solid objection to the practice of vaccination,

The true and real objection, if such a thing exists, is whether the vaccination be *dangerous;* whether any considerable number of persons vaccinated in *proper circumstances* have *died*, or become *dangerously ill* in *consequence* of vaccination; and whether these numbers equally or nearly approach to the numbers that have died by the natural small-pox, or in consequence of the common mode of inoculation. This is the true criterion. If small-pox and cow-pox stand on the same ground in this respect, the apparent failures of the latter, even supposing they were much more numerous than has ever been pretended, afford no argument against the practice of vaccine inoculation.

The Peruvian bark sometimes fails to cure the ague, and other disorders for which it is generally deemed a specific. Mercury sometimes fails to cure certain cases of the *Lues Venerea.* Shall *cinchona* and *quicksilver* be excluded from the *materia medica*, because once in a thousand times they do not produce the effect for which they, agreeably to universal experience, usually administered?

Shall vaccination be exploded, because there may have occurred rare instances, either from unskilful management, or owing to an uncommon peculiarity of the habit and constitution, of its not having prevented small-pox, or rendered the person for ever unsusceptible of variolous contagion?

It is well known that persons labouring under pulmonary consumption require that the atmosphere they breathe should be pure and mild, and that physicians have been induced to adopt a variety of expedients to answer this purpose. As a cow is a most clean and healthy animal, many sickly persons have gladly lodged near a cow-yard: and Dr. Bergius, a Swedish physician of consummate skill, and many others his followers in Britain and France, recommend a residence in a cow-house, which has uniformly relieved the patient, particularly during the cold season.

Can we, therefore, be surprised that almost every part of the civilized world has produced abundant testimonies of the safety and efficacy of vaccine inoculation? Attestations of its complete success have been published by a great number of the Faculty at Edinburgh, Liverpool, and Dublin. Our readers will find able and satisfactory answers to all the objections that have been urged against the JENNERIAN practice in the following

REPORT.

"The Medical Council of the Royal Jennerian Society having been informed that various cases had occurred, which excited prejudices against vaccine inoculation, and tended to check the progress of that important discovery in this kingdom, appointed a Committee of twenty-five of their members to enquire, not only into the nature and truth of such cases, but also into the evidence respecting instances of small-pox alledged to have occurred twice in the same person.

"In consequence of this reference, the Committee made diligent inquiry into the history of a number of cases, in which it was supposed that vaccination had failed to prevent the small-pox, and

also of such cases of small-pox as were stated to have happened subsequently to the natural or inoculated small-pox.

"In the course of their examination the Committee learned, that opinions and assertions had been advanced and circulated, which charged the cow-pox with rendering patients liable to particular diseases, frightful in their appearance, and hitherto unknown; and judging such opinions to be connected with the question as to the efficacy of the practice, they thought it incumbent upon them to examine also into the validity of these injurious statements respecting vaccination.

"After a very minute investigation of these subjects, the result of their inquiries has been submitted to the Medical Council; and from the report of the Committee it appears:

"I. That most of the cases which have been brought forward as instances of the failure of vaccination to prevent the small-pox, and which have been the subjects of public attention and conversation, are either wholly unfounded or grossly misrepresented.

"II. That some of the cases are now allowed, by the very persons who first related them, to have been erroneously stated.

"III. That the statements of such of those cases as are published have, for the most part, been carefully investigated, ably discussed, and fully refuted, by different writers on the subject.

"IV. That notwithstanding the most incontestable proofs of such misrepresentations, a few medical men have persisted in repeatedly bringing the same unfounded and refuted reports and misrepresentations before the public, thus perversely and disengenuously labouring to excite prejudices against vaccination.

"V. That in some printed accounts adverse to vaccination, in which the writers had no authenticated facts to support the opinions they advanced, nor any reasonable arguments to maintain them, the subject has been treated with indecent and disgusting levity; as if the good or evil of society were fit objects for sarcasm and ridicule.

"VI. That when the practice of vaccination was first introduced and recommended by Dr. JENNER, many persons, who had never seen the effects of the vaccine fluid on the human system, who were almost wholly unacquainted with the history of vaccination, the characteristic marks of the genuine vesicle, and the cautions necessary to be observed in the management of it, and were therefore incompetent to decide whether patients were properly vaccinated or not, nevertheless ventured to inoculate for the cow-pox.

"VII. That many persons have been declared duly vaccinated, when the operation was performed in a very negligent and unskilful manner, and when the inoculator did not afterwards see the patients, and therefore could not ascertain whether infection had taken place or not; and that to this cause are certainly to be attributed many of the cases adduced in proof of the inefficacy of the cow-pox.

"VIII. That some cases have been brought before the Committee on which they could form no decisive opinion, from the want of necessary information as to the regularity of the preceding vaccination, or the reality of the subsequent appearance of the small-pox.

"IX. That it is admitted by the Committee, that a few cases have been brought before them of persons having the small-pox who had apparently passed through the cow-pox in a regular way.

"X. That cases, supported by evidence equally strong, have been also brought before them, of persons who, after having once regularly passed through the small-pox, either by inoculation or natural infection, have had the disease a second time.

"XI. That in many cases, in which the small-pox has occurred a second time, after inoculation on the natural disease, such recurrences has been particularly severe, and often fatal; whereas, when it has appeared to occur after vaccination, the disease has generally been so mild, as to lose some of its characteristic marks, and even sometimes to render its existence doubtful.

"XII. That it is a fact well ascertained, that, in some particular states of certain constitutions, whether vaccine or variolous matter be employed, a local disease will only be excited by inoculation, the constitution remaining unaffected; yet that matter taken from such local vaccine or variolous pustule is capable of producing a general and perfect disease.

"XIII. That if a person bearing the strongest and most indubitable marks of having had the small-pox be repeatedly inoculated for that disease, a pustule may be produced, the matter of which will communicate the disease to those who have not been previously infected.

"XIV. That, although it is difficult to determine precisely the number of exceptions to the practice, the Medical Council are fully convinced that the failure of vaccination, as a preventive of the small-pox, is a very rare occurrence.

"XV. That of the immense number who have been vaccinated in the Army and Navy, in different parts of the United Kingdom, and in every quarter of the Globe, scarcely any instances of such failure have been reported to the Committee, but those which are said to have occurred in the metropolis or its vicinity.

"XVII. That the Medical Council are fully assured, that in very many places, in which the small-pox raged with great violence, the disease has been speedily and effectually arrested in its progress, and in some populous cities wholly exterminated, by the practice of vaccination.

"XVII. That the practice of inoculation for the small-pox, on its first introduction into this country, was opposed and very much retarded, in consequence of misrepresentations and arguments drawn from assumed facts, and of miscarriages arising from the want of correct information, similar to those now brought forward against vaccination, so that nearly fifty years elapsed before small-pox inoculation was fully established.

"XVIII. That, by a reference to the bills of mortality, it will appear that, to the unfortunate neglect of vaccination, and to the prejudices raised aginst it, we may, in a great measure, attribute the loss of nearly two thousand lives by the small-pox, in this metropolis alone, within the present year.

"XIX. That the few instances of failure, either in the inoculation of the cow-pox or of the small-pox, ought not to be considered as objections to either practice, but merely as deviations from the ordinary course of nature.

"XX. That if a comparison be made between the preservative effects of vaccination and those of inoculation for the small-pox, it would be necessary to take into account the greater number of persons who have been vaccinated within a given time: as it is probable that, within the last seven years, nearly as many persons have been inoculated for the cow-pox, as were ever inoculated for the small-pox, since the practice was introduced into the kingdom.

"XXI. That, from all the facts which they have been able to collect, it appears to the Medical Council, that the cow-pox is generally mild and harmless in its effects; and that the few cases which have been alleged against this opinion, may be fairly attributed to peculiarities of constitution.

"XXII. That many well-known cutaneous diseases, and some scrophulous complaints, have been represented as the effects of vaccine inoculation, when in fact they originated from other causes, and in many instances occurred long after vaccination, and that such diseases are infinitely less frequent after vaccination, than after either the natural or inoculated small-pox.

"Having stated these facts, and made these observations, the Medical Council cannot conclude the Report upon a subject so highly important and interesting to all classes of the community, without making this solemn Declaration:

"That, in their opinion, founded on their own individual experience, and the information which they have been able to collect from that of others, mankind have already derived great and incalculable benefit from the discovery of vaccination; and that it is their full belief, that the sanguine expectations of advantage and security, which have been formed from the inoculation of the cow-pox, will be ultimately and completely fulfilled."

This Report and Declaration was signed at the Society's House, *Salisbury-Square, Fleet Street*, January 2, 1806, by fifty physicians and surgeons, who, we may safely presume to say, are not exceeded in medical skill, or intellectual worth, by any other fifty gentlemen of the profession in this great metropolis.

INSTRUCTIONS FOR VACCINE INOCULATION

Published by Order of the Medical Council of the Royal Jennerian Society.

AN ACCURATE KNOWLEDGE OF THE SIGNS OF INFECTION, AND OF THE CHARACTER AND PROGRESS OF THE VACCINE VESICLE, IS ESSENTIAL TO THE SUCCESS OF THIS INOCULATION.

The Signs of infection, and Description of the Vaccine Vesicle.

WHEN Vaccine Inoculation proves successful, a small red spot, with a degree of elevation which may be felt, commonly com-

mences on the third day. When examined with a magnifying glass, it seems to consist of a small tumour, surrounded by a slight efflorescence.

Between the third and sixth day, a vesicle appears; the shape and magnitude of which depend much on the mode in which the inoculation has been performed: when it is performed by a slight puncture, the vesicle will be small and circular.

The edge of the vaccine vesicle is elevated and well defined; the center is depressed, and a speck is there visible, of a darker colour than the rest of the surface. This vesicle is distinguished from other vesicles by the peculiarity of its structure, which is cellular, and somewhat hard and firm. At first it is of a light pink colour, sometimes blended with a bluish tint, gradually changing in its progress into a pearl colour. Its contents are limpid, and almost colourless. It commonly increases in size till about the tenth day.

In its early stages it has usually a small inflamed ring round its base, which about the ninth day begins to spread rapidly; and about the tenth forms an areola, more or less circular, an inch and half or more in diameter. This areola is of a pink, scarlet, or crimson hue; and is attended with some degree of hardness and tumefaction. It continues nearly stationary a day or two, and then begins to fade; sometimes forming, on its decline, two or three concentric circles.

When the areola is perfectly formed, the vesicle begins to decline; first it turns brown in the center; then it is gradually converted into a hard, smooth shining scab, of a dark mahogany brown colour approaching to black; and, in its general appearance, has not unaptly been compared to a tamarind stone. This scab commonly falls off about the end of the third week, and leaves a circumscribed cicatrix, clearly denoting that the true skin has been affected.

In the computation of time, the day of inoculation is to be considered as the first day.

Occasional Deviations of the Vaccine Vesicle from its ordinary Appearances and Character.

Deviations are occasionally met with, even in the genuine vaccine vesicle; chiefly with regard to its rise, duration, and contents.

It seldom or never appears earlier, but often later than the period already mentioned; sometimes not till after the expiration of a fortnight or three weeks; but if it then makes a regular progress, it renders the patient equally secure as if it had appeared at the usual time.

Sometimes the vesicle is ruptured by external violence. In that case, the scab will in general be less firm, and of a lighter colour. Occasionally also, instead of the regular progress to desiccation, as above described, it passes into a state of ulceration, with a much more extended inflammation.

The contained fluid, instead of being limpid as usual, is now and then found opake.

Spurious Pustules which afford no Security against the Small-Pox.

The success of the operation is doubtful when there is any considerable deviation from the usual course of the disease; whether premature inflammation, irritation, itching, or vesication occurs; or the progress of the vesicle is too rapid, its contents yellow or opake, its texture soft, its centre elevated, or its form not well defined; or whether a premature efflorescence takes place, and a distinct, vivid, circumscribed areola is wanting.

This anomalous vesicle, or spurious pustule, as it is called, is more liable to be broken than the regular genuine vesicle, from its centre being more elevated, and its texture less firm. When broken, it is frequently succeeded by ulceration; or by a light brown or amber-coloured creeping scab.

Probable Causes of Spurious Pustules.

Spurious pustules may be occasioned not only by matter taken from a spurious pustule, but also by matter taken from a genuine vesicle at too late a period; or by that which has been injured by keeping, exposure to heat, or any other cause. They may also be occasioned by using rusty lancets in inoculating; by rude and unskilful methods of performing the inoculation; or by the genuine vesicle having been destroyed at an early stage, and the regular progress of the disease thus interrupted.

The Methods of taking Vaccine Matter for Inoculation, and of preserving and conveying it.

Matter may be taken from a genuine vesicle at any time from its commencement till the areola begins to spread; commonly till the eighth or ninth day, sometimes later, but never after the areola is fully formed.

It is to be taken by small superficial punctures, made in several parts of the vesicle with the point of a lancet introduced horizontally. Time should be allowed for the fluid to exude, which will appear on the vesicle in the form of small pellucid drops. If necessary, very slight pressure may be applied with the flat surface of the lancet, to quicken the discharge.

Great caution must be observed in this process; or violent inflammation and extensive ulceration may sometimes ensue.

The matter may be received on the points of common lancets, when it is designed for use immediately, or within a very few days; otherwise these instruments cannot with propriety be employed either for the preservation or conveyance of vaccine matter, as when charged with that fluid they soon rust. An ivory lancet is not liable to this objection. It may be fixed in a handle, and screwed into a case, in order to exclude air.

A common method is, to take two small square pieces of glass, on the centre of one of which the matter may be received, by applying the glass to the vesicle, punctured in several places, in the manner before described, and covered with the fluid; it may then be suffered to dry, and applied to the vesicle repeatedly. When

fully charged and dry, it is to be covered with the corresponding piece of glass, and wrapped up in writing-paper, or gold-beater's skin.

Matter may be also taken on thread, which being inbued with it, must be suffered to dry, and then charged again: this process may be repeated till it is well saturated: it may be kept in a phial, or in a quill, or a piece of tobacco-pipe stopped with white-wax: the heat necessary to melt sealing-wax might injure the matter.

Another way of preserving matter is, to take it on the end of a quill, which, when dry, may be inserted into the barrel of another quill; or if slender portions of a quill be pointed like tooth-picks, a number of them, when changed, may be inclosed in the barrel of one quill. These, as well as the thread, afford convenient modes of conveying the matter in a letter to any distant place.

A small instrument made of ivory, shaped like the tooth of a comb, and pointed like a lancet, which may be called a vaccinator, is in every respect as well adapted to the same purpose; and not being liable to bend, it is introduced into the puncture with more ease and certainty than the tooth pick. These instruments require much less matter to charge them than thread or glass; but when they are not intended to be used soon, they ought to be repeatedly charged. When they are to be used in a short time, it is sufficient to wrap them in paper.

Matter must always be allowed to dry without heat in the shade, and be kept in a dry cool place.

Every practitioner who has not a constant succession of patients, ought to take matter when he has an opportunity, and to preserve it for any future occasion.

The Modes of Inoculation.

The constitutional as well as the local symptoms of the vaccine affection, depend in a great degree on the mode in which the virus is inserted. The smaller the wound of the skin is, the lighter in general is the disease.

Fluid matter is better than dry, when it can be procured, because it is more likely to produce infection; and the operation is more lightly and quickly performed. Hence it is evident, that in every instance where it is practicable, the patient from whom the matter is to be taken should be present, and the matter should be transferred immediately from arm to arm.

Inoculation is generally performed in the upper arm, near the insertion of the deltoid muscle; but in some adults, who are likely to use the arm much, it is more advisable to inoculate on the inside of the leg, a little below the knee.

The point of a lancet being charged, the skin should be stretched, that the cuticle may be penetrated with more ease. A small superficial puncture is then to be made with the point of the lancet, which will be more likely to leave the matter in contact with the skin, and to produce the desired effect, if it be held nearly in a horizontal direction. It is also worthy of remark that, when

held in this direction, the lancet meets with greater obstruction when it has penetrated to a sufficient depth. On the contrary, when it is inserted in a more oblique or a perpendicular direction, it often penetrates suddenly to such a depth as to cause an effusion of blood, which washes away the matter, and prevents the operation from succeeding. In order to render infection more certain, the point of the lancet may be charged with matter a second time, and wiped on the puncture.

When several successive inoculations are to be performed, the lancet should be dipped in cold water, and wiped after every puncture.

Dry matter has been sometimes known to succeed after the expiration of several months, but that which is recent is always preferable.

Dry matter on glass may be moistened with a little cold or tepid water on the point of a lancet, allowing it some time to dissolve, and blending it by a little friction with the lancet. It must not be much diluted, but of a thick consistence. It is to be inserted in the same manner as the recent fluid.

Dry matter on the barrel of a quill may be applied, without dilution, to a very small abrasion or incision of the skin; and, being held in contact for some time, and then repeatedly drawn over the part, it will dissolve and be lodged in the wound.

When ivory lancets, tooth-picks, and vaccinators, charged with dry matter, are used, the matter should not be first diluted, but, a puncture having been first made with a common lancet, the point of the instrument is to be inserted, and held in the puncture half a minute or more; when the matter will gradually dissolve, and remain in the part. If the part of the instrument which is charged, be afterwards wiped repeatedly upon the edges of the puncture, it will tend to ensnre success.

Thread, charged with dry matter, may be used either dry or just moistened with cold or tepid water. A slight incision or abrasion is then to be made, not more than an eighth part of an inch in length, on which a small portion of the thread is to be placed. This is to be covered with a small bit of paper, and to be retained two or three days by a mild adhesive plaster:—what is called court-plaster is liable to produce irritation.

Inoculated patients must be cautioned not to wear tight sleeves, and not to injure the arm by pressure, friction, or any other violence, lest extensive inflammation or ulceration should ensue.

One vaccine vesicle secures the patient from all danger of the small-pox; but in many instances it is better to inoculate in both arms, especially when the small-pox is epidemic, or the matter is dry, or the place of the patient's residence distant.

Lancets used for inoculation should be kept clean and bright.

Constitutional Symptoms.

The constitutional symptoms sometimes occur at a very early period, but more commonly from the seventh to the eleventh day.

In some cases the patient is drowsy; in others restless. Sometimes there is a chilliness succeeded by heat, thirst, head-ach, and

other marks of febrile affection. Now and then a sickness or vomiting takes place, especially in infants.

The constitutional symptoms, of whatever kind, are in general slight and transient, and such as require no remedy.

In a great proportion of cases there is no perceptible indisposition; nevertheless, the person vaccinated is not the less secure from the future infection of the small-pox, provided the progress of the vesicle has been regular and complete.

Care must be taken not to confound the symptoms of infantile or other diseases with those of vaccine inoculation.

Medical Treatment.

In general no medicine is required in this mild affection: but if the symptoms happen to run a little more high than usual, the same remedies are to be applied as if they proceeded from any other cause.

No preparation is necessary; and no cathartics need be given either before or after vaccination.

Should inflammation of the arm exceed the usual bounds, which rarely happens but from tight sleeves, pressure, or friction, it may soon be checked by the very frequent application of compresses of linen dipped in water, *aqua lythargyri acetati composita,* or a solution of one drachm of *cerussa acetata* in a pint of water. These are to be applied cold.

If the scab be rubbed off prematurely, and ulceration take place, cooling and astringent applications may be used, such as a drop of *aqua lythargyri acetati,* which should be allowed to dry on the part, and then be covered with compressed dipped in water, or any of the saturnine applications above mentioned, and frequently renewed.

When the ulceration is deep or extensive, a poultice, either of bread and milk, or of bread with any of the saturnine preparations, may be applied, as the case seems to require. They must never be applied till they are nearly or quite cold.

In such foul and obstinate sores as resist the foregoing applications, the ointment of nitrated quicksilver, the nitrated quicksilver or lunar caustic, or other similar applications, are sometimes resorted to with advantage. A single dressing with these substances is usually sufficient, after which the sore heals under the mildest applications.

Spurious pustules are frequently followed by ulceration at an early period. This ulceration is to be treated in the same manner as if it proceeded from the genuine species.

An assurance of perfect security from vaccine inoculation can only be obtained by carefully observing the whole progress of the disease. If any doubt remain, the operation ought to be repeated.

When the patient has been previously exposed to the infection of the small-pox, that disease will be superseded more or less, according to the time which is suffered to elapse before the inoculation of the cow-pock.

The advantages of vaccine inoculation being now fully ascer-

tained, it is the duty of every member of society, and particularly of every member of the medical profession, to discourage the inoculation of the small-pox.

*** *Communications of real importance, relating to the vaccine practice, will meet with ready attention by the Medical Council of the Royal Jennerian Society.—It is requested that they be drawn up concisely, and well authenticated.*

CHAP. XXIV.

OF THE MEASLES.

THE measles appeared in Europe about the same time with the small-pox, and have a great affinity to that disease. They both came from the same quarter of the world, are both infectious, and seldom attack the same person more than once. The measles are most common in spring season, and generally disappear in summer. The disease itself, when properly managed, seldom proves fatal; but its consequences are often very troublesome.

CAUSE.—This disease, like the small-pox, proceeds from infection, and is more or less dangerous according to the constitution of the patient, the season of the year, the climate, &c.

SYMPTOMS.—The measles, like other fevers, are preceded by alternate fits of heat and cold, with sickness, and loss of appetite. The tongue is white, but generally moist. There is a short cough, a heaviness of the head and eyes, drowsiness, and a running at the nose. Sometimes indeed the cough does not come before the eruption has appeared. There is an inflammation and heat in the eyes, accompanied with a defluxion of sharp rheum and great acuteness of sensation, so that they cannot bear the light without pain. The eyelids frequently swell so as to occasion blindness. The patient generally complains of his throat; and a vomiting or looseness often precedes the eruption. The stools in children are commonly greenish; they complain of an itching of the skin, and are remarkably peevish. Bleeding at the nose it common, both before and in the progress of the disease.

About the fourth day, small spots, resembling flea-bites, appear first upon the face, then upon the breast, and afterwards on the extremities: these may be distinguished from the small-pox by their scarcely rising above the skin. The fever, cough, and difficulty of breathing, instead of being removed by the eruption, as in the small-pox, are rather increased: but the vomiting generally ceases.

About the sixth or seventh day from the time of sickness, the measles begin to turn pale on the face, and afterwards upon the body; so that by the ninth day they entirely disappear. The fever however, and difficulty of breathing, often continue, espe-

cially if the patient has been kept upon too hot a regimen. Petechiæ, or purple spots, may likewise be occasioned by this error.

A violent looseness sometimes succeeds the measles; in which case the patient's life is in imminent danger.

Such as die of the measles generally expire about the ninth day from the invasion, and are commonly carried off by a peripneumony, or inflammation of the lungs.

The most favourable symptoms are a moderate looseness, a moist skin, and a plentiful discharge of urine.

When the eruption suddenly falls in, and the patient is seized with a delirium, he is in the greatest danger. If the measles turn too soon of a pale colour, it is an unfavourable symptom, as are also great weakness, vomiting, restlessness, and difficulty of swallowing. Purple or black spots appearing among the measles are very unfavourable. When a continual cough, with hoarseness, succeeds the disease, there is reason to suspect an approaching consumption of the lungs.

Our business in this disease is to assist Nature, by proper cordials, in throwing out the eruption, if her efforts be too languid; but when they are too violent, they must be restrained by evacuations, and cool diluting liquors, &c. We ought likewise to endeavour to appease the most urgent symptoms, as the cough, restlessness, and difficulty of breathing

REGIMEN.—The cool regimen is necessary here as well as in the small-pox. The food too must be light, and the drink diluting. Acids however do not answer so well in the measles as in the small-pox, as they tend to exasperate the cough. Small-beer likewise, though a good drink in the small-pox, is here improper The most suitable liquors are decoctions of liquorice with marsh-mallow roots and sarsaparilla, infusions of linseed or of the flowers of elder, balm-tea, clarified whey, barley-water, and such like. These, if the patient be costive, may be sweetened with honey; or if that should disagree with the stomach, a little manna may occasionally be added to them.

MEDICINE.—The measles being an inflammatory disease, without any critical discharge of matter, as in the small-pox, bleeding is commonly necessary, especially when the fever runs high, with difficulty of breathing, and great oppression of the breast. But if the disease be of a mild kind, bleeding, which in few diseases is more necessary, may be omitted.

Bathing the feet and legs frequently in lukewarm water, both tends to abate the violence of the fever, and to promote the eruption.

The patient is often greatly relieved by vomiting. When there is a tendency this way, it ought to be promoted by drinking lukewarm water, or weak camomile-tea.

When the cough is very troublesome, with dryness of the throat, and difficulty of breathing, the patient may hold his head over the steam of warm water, and draw the steam into his lungs.

He may likewise lick a little spermaceti and sugar candy pounded

together; or take now and then a spoonful of the oil of sweet almonds, with sugar-candy dissolved in it. These will soften the throat, and relieve the tickling cough.

If at the turn of the disease the fever assumes new vigour, and there appears great danger of suffocation, the patient must be bled according to his strength, and blistering-plasters applied, with a view to prevent the load from being thrown on the lungs, where, if an inflammation should fix itself, the patient's life will be in imminent danger.

In case the measles should suddenly disappear, it will be necessary to pursue the same method which we have recommended when the small-pox recede. The patient must be supported with wine and cordials. Blistering-plasters must be applied to the legs and arms, and the body rubbed all over with warm flannels. Warm poultices may likewise be applied to the feet and palms of the hands.

When purple or black spots appear, the patient's drink should be sharpened with spirits of vitriol; and if the putrid symptoms increase, the Peruvian bark must be administered in the same manner as directed in the small-pox.

Opiates are sometimes necessary, but should never be given except in cases of extreme restlessness, a violent looseness, or when the cough is very troublesome. For children the syrup of poppies is sufficient. A tea-spoonful or two may be occasionally given, according to the patient's age, or the violence of the symptoms.

After the measles are gone off, the patient ought to be purged. This may be conducted in the same manner as directed in the small-pox.

If a violent looseness succeeds the measles, it may be checked by taking for some days a gentle dose of rhubarb in the morning, and an opiate over night; but if these do not remove it, bleeding will seldom fail to have that effect.

Patients recovering after the measles should be careful what tney eat or drink. Their food for some time ought to be light, and in small quantities, and their drink diluting, and rather of an opening nature, as butter-milk, whey, and such like. They ought also to beware of exposing themselves too soon to the cold air, lest a suffocating catarrh, an asthma, or a consumption of the lungs, should ensue.

Should a cough, with difficulty of breathing, and other symptoms of a consumption, remain after the measles, small quantities of blood may be frequently let at proper intervals, as the patient's strength and constitution will permit. He ought likewise to drink asses milk, to remove to a free air if in a large town, and to ride daily on horseback. He must keep close to a diet consisting of milk and vegetables; and lastly, if these do not succeed, let him remove to a warmer climate.

The scarlet fever is so called from the colour of the patient's skin, which appears as it were tinged with red wine. It happens at any season of the year, but is most common towards the end of summer; at which time it often seizes whole families. Whenever the scarlet fever is epidemical, it usually affects women two or three days after lying in, and often proves fatal to them. Children and young persons are most subject to this disease, which may be suppressed in its commencement by different means, as emetics of the wine of ipecacuanha; doses of equal parts of rhubarb and sal-polychrest, sufficient to procure two motions every day; but sometimes the person who thus escapes the formation of the disease is liable to be re-infected, a circumstance which otherwise rarely occurs. It appears also, from satisfactory evidence, that convalescents from scarlet fever are capable of communicating infection ten days, or longer, according to the previous violence of the disease, after their perfect recovery.

Scarlet fever, like other fevers, begins with coldness, shivering, and pains in the head, without any violent sickness. About the third day the skin is covered with red spots, which are broader, more florid, and less uniform than the measles: the whole skin becomes of a bright scarlet colour, which in three or four days disappear; after which the cuticle, or scarfskin, falls off.

There is seldom any occasion for medicine in this disease. The patient ought however to keep within doors, to abstain from flesh, strong liquors, and cordials, and to drink freely of cool diluting liquors. If the fever runs high, the body must be kept gently open by emollient clysters, or small doses of nitre and rhubarb. A scruple of the former with six grains of the latter may be taken thrice a-day, or oftener, if necessary.

Children and young persons are sometimes seized at the beginning of this disease with a kind of stupor and epileptic fits. In this case the feet and legs should be bathed in warm water, and a large blistering plaster applied to the neck: his drink should be barley-water acidulated with lemon-juice or tamarinds; and a dose of the syrup of white poppies given every night till the patient recovers.

The scarlet fever however is not always of so mild a nature. It is sometimes attended with putrid or malignant symptoms, in which case it is always dangerous. In the malignant scarlet fever the patient is not only affected with coldness and shivering, but with languor, sickness, and great oppression; to these succeed successive heat, nausea and vomiting, with a soreness of the throat; the pulse is extremely quick, small, and depressed; the breathing frequent and laborious; the skin hot, but not quite dry; the tongue moist, and covered with a whitish mucus; the tonsils inflamed and ulcerated. When the eruption appears, it brings no relief; on the contrary, the symptoms generally grow worse, and fresh ones come on, as purging, delirium, &c.

When this disease is mistaken for a simple inflammation, and treated with repeated bleedings and strong cathartics, or too cooling medicines, it generally proves fatal. The medicines to be depended on in this case are cordials and antiseptics, as cinchona, wine, snake-root, and the like. The treatment must be in general similar to that of putrid fever, or of the malignant ulcerous sore throat.

In the year 1774 a very bad species of this fever prevailed during winter in Edinburgh. It raged chiefly among young people. The eruption was generally attended with a quinsey; and the inflammatory symptoms were so blended with others of a putrid nature, as to render the treatment of the disease very difficult. Many of the patients, towards the decline of the fever, were afflicted with large swellings of the submaxillary glands, and not a few had a suppuration in one or both ears.

If soreness of the throat accompanies this fever, it may perhaps be the *putrid* or *malignant sore throat*, which will probably require the utmost exertions of the most able physician. Wine, cordials, and food which are pernicious in *measles* and the *scarlet fever*, are absolutely necessary, and to be exhibited with perseverance.

When the scarlet fever is succeeded by anasarcous swelling, the greatest care is required, since should it be neglected, an incurable dropsy may be the consequence.

Washing the hands and feet with tepid water, or vinegar, nay, sometimes washing the whole body daily with equal parts of vinegar and water, has been practised with success, particularly in the treatment of typhus fever; nevertheless, bathing in fevers has not been reckoned among the regular means of regular physicians, till it was lately brought into notice by Dr. Jackson and the late Dr. Currie of Liverpool. To their useful writings we owe the revival of a practice of great antiquity; for this remedy was not unknown in the time of the Emperor Augustus, and its use and management were well known to Galen, and accurately defined by him.

The cold and tepid affusion is now employed as a remedy in fever, confluent small-pox, measles, and influenza. Of its use in scarlect fever, Dr. Gregory, Professor of Medicine at the University of Edinburgh, gives the following striking instance, in a letter to the late Dr. Currie.

"THIS day se'nnight (1st November) my eldest son, a boy of six years of age, of a sanguine temperament and very irritable constitution, was taken ill about noon, when out at his walk. Your friend Benjamin Bell saw him before I did; for having called on me to speak about a patient, he enquired for my wife, and found the child with her lying on a settee. She anxiously begged of him to examine the child, and see whether he had got the scarlet fever, which she suspected to be the case. Mr. Bell had no difficulty in pronouncing the disease was the scarlet fever; for even by that time (within two hours from the invasion) the erup-

tion of red prominent points was very copious and evident, so as to give a general roughness and redness to the skin of the breast. In that state I found him soon after Mr. Bell had left him; his pulse frequent and small; his skin but just beginning to grow hot, and his hands rather cold. He complained of general oppression, uneasiness, and head-ach. The velum pendulum, uvula, and tonsils, were of a dark purple red; but there were no ulcers or aphthæ on them that I could see. Before six at night, he had much more severe head-ach and oppression, with nausea, vomiting, and diarrhœa; his pulse 140 and very strong; his skin very hot, and of a bright red, with a considerable degree of roughness all over it.

"Conceiving this to be a case of the most imminent danger, and in every respect, proper for your cold practice, I lost no time in getting him taken out of bed, stripped and set erect in a tub, in which situation I poured a gardener's watering pan full of cold water all over him, from head to foot. This relieved him a good deal, and, as you may believe, cooled him very effectually; but before ten at night the symptoms had recurred with more violence than ever. His pulse was 160, and very strong; his face turgid, his eyes growing red, his skin very red from head to foot, and very hot. I did not measure the heat of his skin by the thermometer; but I think it must have been at least 104 degrees of Fahrenheit. I immediately repeated the cold effusion as before, and with the same good effect. He was immediately cooled and refreshed, and half an hour after I found his pulse 120, and the heat of his skin very moderate. He had a pretty good night; but before eight next morning, was become very hot again; on which account the effusion was repeated in the same manner. He said he did not like my way of bathing, and would rather be bathed in his own tub; and as I thought, from the state of the symptoms, that there was occasion for it, he was bathed in his tub, and fairly laid under water, over head and ears, between eleven and twelve at noon, and again at six in the evening of the second day.

"These five good sousings in twenty-four hours seemed to have done the business completely. The eruption was not repelled, but the progress of the local affection in the throat seemed to be stopped. I could never see any ulcerations in it, though I looked carefully for them, in consequence of having observed much fœtor of his breath on the second evening. The force of the fever, as to heat and frequency, and strength of pulse, was quite broken after the fifth ducking; to such a degree even, that I began to have some fears that the *vis vitæ* might fail, and had actually provided wine to be at hand, to give him from time to time in case of need; and I saw him several times during the night, between the second and third day of his disease. But I found no occasion to give him any of it; nor has he had a grain of medicine, or even a drop of wine, during his illness; so that you must allow it has been a very fair experiment of the cold affusion, as a remedy for the scarlet fever. His throat was quite well the morning of the fourth day: the same day he had some slight swelling of the hands, but not the

twentieth part of what I have often seen after a severe attack of the *scarlatina*. He is losing his cuticle by desquamation, as was to be expected; he has been washed with tepid water and soap for three or four nights, to promote that desquamation, and relieve the itching of his skin. He has not yet recovered his flesh, strength, or colour, but seems in a fair way to do so soon, for he has a keen appetite and digestion. This is only the ninth day of his disease.

"You may be sure, from this detail, that I am perfectly well pleased with your practice in this disease, and that I shall gladly follow it in any proper case of the same kind that may come under my care, if I am allowed to do so. It is more than possible that I shall soon have occasion to try it on two other of my sons; one of them past four, the other of them almost two years of age, and both of them of the same sanguine temperament of their eldest brother. Both of these young children were exposed to the contagion from their cousin, as much as my eldest son was, and both of them were with him when he sickened, and for two hours after, so that I could have no hope of preserving them from the contagion: they have both had the *cow-pox*."

"*Wednesday, Nov. 9.*

"Yesterday afternoon my youngest son sickened, and had the usual symptoms of oppression, sickness, vomiting, diarrhœa, frequent crying, frequent pulse; copious red eruption on the skin in less than three hours after he began to be uneasy, flushing of the face, and increase of heat: his voice is somewhat affected, and hoarse; but he swallows liquids and solids without difficulty, so that I have no great fears for his throat.

"Though he was never so hot as his brother, he was washed in a tub with cold water about seven o'clock, and again about eleven, last night, and twice to-day already with tepid water, as he was still less hot than yesterday, and his feet even cool. He has been relieved by the washing all the four times, and has always gone to sleep after it for a longer or shorter time.

"My other son (the four year old gentleman) has not yet sickened, but I expect him to be taken ill to-night or to-morrow; for last night he had very little sleep, and frequently through the night and to-day he has complained of being *tired*. *Lassitudines spontaneæ morbos denunciant* is one of the oldest maxims that I know of in physic. Whenever he sickens, I mean to treat him as I have done his brothers.

"Your's, most truly,

"J. GREGORY."

To the same.

"Dear Sir, Edinburgh, 10th Dec. 1803.

"I AM sure it will give you satisfaction to know that my children have ALL done very well under your practice for the scarlatina. The eldest and youngest, though they have not yet fully recovered their strength, are recovering very fast, are in excellent spirits, and on the whole so well that they have been out of doors repeatedly, both in the carriage and on foot, though the weather

has been very cold, even with frost andsnow for some days. Both of them have still some swelling of the lymphatic glands on both sides of the neck, extending from the ear almost to the shoulder. This I think the more remarkable, as I could see no ulceration of the throat, and no particular cutaneous affection on the hairy scalp of either of them. The swelled glands are no longer painful, and are already growing smaller and softer, so I presume they will discuss completely without any difficulty.

"The four year old gentleman whom you enquire after, sickened on Monday morning, 14th of November. He had been complaining for five days, much and frequently, both day and night, of being tired: at day-break on Monday he complained much of the head-ach, and, upon looking at his skin, he was found to be from head to foot as red as a boiled lobster. His pulse for two days was nearly as quick as his elder brother's had been (from 130 to 150), but it was not near so strong; nor was his skin ever so hot as his elder brother's had been. He had no vomiting, or diarrhœa, as both the others had, but his body continued quite open as in his perfect health. Supposing the head-ach, which in him was very severe, to proceed from the stomach or bowels being in some measure loaded, I gave him, on the afternoon of the second day, three grains of calomel, which did not operate as a purge, but soon and very effectually as an emetic, and seemed to remove his head-ach; but as this returned on the morning of the third day, after being suspended about sixteen hours, two good leeches were applied to his temples, by which he lost a good deal of blood, with great and immediate relief to the head-ach, which has not returned.

"The cure in this boy, as in the other two, was trusted to the washing; but as his pulse was not very strong, nor his heat very great, the water was not perfectly cold, though very gently tepid; so little warm as to make him shiver. It seems to have succeeded as well with him as with either of his brothers.

"I have had much pleasure in observing repeatedly in the youngest child (the two year old gentleman) the great and immediate good effects of the cold or tepid washing, not only in lessening the frequency of the pulse and heat of the skin, but in relieving the febrile oppression and uneasiness. The little patient, who just before was crying very much, unable to hold up his head, incapable of being pleased or amused with any thing, nay almost incapable of looking at any thing, immediately after being washed (I mean in two or three minutes), would begin to look up and take notice of the people near him; then amuse himself with his playthings; then get upon his legs, and run about upon the floor; and at last go quietly to sleep."

The safest and most advantageous time for using the cold affusion is when the exacerbation is at its height, or immediately after its declination has begun. This is generally from six till nine o'clock in the evening; but may be safely used at any time of the day *when there is no sense of chilliness present; when the heat of the*

surface is steadily above what is natural; and when there is no general or profuse perspiration.

The late Dr. Currie, for several of the last years of his useful life, invariably employed this "DOMESTIC" remedy, viz. the affusion of water, cold and tepid, in the diseases above-mentioned. Used in the three first days of fever, the cold affusion generally tops the disease: the same happy effect sometimes follows its use on the fourth or even the fifth day, but seldom later. Even in the subsequent stages, where the heat continues preternaturally great, and the skin dry, it is of great and manifest advantage, almost immediately relieving the most distressing symptoms, particularly restlessness and delirium, and conducting the disease to a safe and speedier issue.

The tepid affusion (the water being 87° to 97° of Fahrenheit's thermometer) is applicable to all the diseases to which the cold affusion is applicable, and possesses very considerable though inferior efficacy. It is, however, very safe, easy of application, and in a high degree grateful, and Dr. Currie extended its employment to almost the whole class of febrile diseases." "In my practice" (said he) the cold and tepid affusions are very often combined in the same disease. While the heat is great, the skin dry, and the vascular action strong, I use water perfectly cold; when these symptoms diminish, I use it cool (87° to 75°), and as they subside still farther, I make it tepid."

In fevers *arising from or unaccompanied by topical inflammation*, Dr. Currie's experience does not justify the use of the cold affusion: though in a great variety of those cases the warm affusion may be used with advantage. "And," says he, "though I have used the cold affusion as late as the twelfth and even the fourteenth day of contagious fever, with safety and success, yet it can only be employed in this advanced period in the instances *in which the heat keeps up steadily above the natural standard, and the respiration continues free.* In such cases I have seen it appease agitation and restlessness, dissipate delirium, and, as it were, snatch the patient from impending dissolution."

Every arrangement should be made for the affusion before the patient is moved at all, and much fatigue, as well as disquiet, should be particularly avoided. And after all, the tepid affusion may be substituted for the more powerful remedy, in cases where the delicacy of the system, or the apprehensions of the bye-standers, prevent the other from being employed.

Three years ago, Mr. Braithwaite, surgeon at Lancaster, published some observations on the utility of the oxygenated muriatic acid in the cure of the scarlet fever, which well deserve the attention of medical practitioners. We shall state the mode of practice he recommends:—

"When called to a patient, in whatever stage of the scarlet fever, my practice," says he, "for two years past has uniformly been as follows:—One drachm of oxygenated muriatic acid is mixed with eight ounces of distilled water in a phial, and shaken

together. This quantity should be taken every twelve hours by a patient from fourteen to twenty years of age. But it is preferable to administer it in draughts, divided from the quantity above-mentioned; from two ounces to half an ounce, as the patient's age and situation require; ordering them to be taken at such periods, as, for an adult, to consume the quantity in the time mentioned; and to younger patients smaller doses, as half a drachm or two scruples of the acid to eight ounces of water. By this method the oxygen gas is not separated and lost each time the phial is opened, as may easily be perceived by its smell in the apartment. It is also absolutely necessary that the medicine be placed in a dark situation, wrapped in a paper, to prevent the disoxygenating influence of light.

Since the use of this medicine, Mr. B. says he never had recourse to emetics, purgatives, blisters, or diaphoretics. A regular perseverance in the oxygenant remedy has universally succeeded. "My patients," says he, "rapidly recovered, and are seldom afflicted with those complaints succeeding the scarlet fever, such as pain of the joints, paucity of urine, and universal anasarcous swellings. Even when these follow, I recommend a continuance of the medicine until these symptoms entirely disappear, which will be found much earlier than by the usual mode of treatment. Indeed, if the oxygenated preparation be duly persevered in, I am of opinion those painful and distressing affections will rarely occur. It is also possessed of this desirable property, that it may be easily taken by children, who generally are the most numerous patients in this disease, and to whom all medicines are administered with difficulty. I have heard them repeatedly cry for that stuff which mended their throat as they expressed it. Indeed, in that respect, its effects are truly admirable, far surpassing the disagreeable practice of gargling and syringing, which in numerous instances, even if possible to do it, is productive of mischief. How far superior, then, must be a remedy, which by passing immediately over the infected and frequently ulcerated part, not only gives instantaneous relief, but entirely removes that fœtid smell originating, in severe cases, from these parts!

"Patients often wish to be frequently sipping a little of the oxygenant liquid, which is not improper; but it must always be done out of a wine-glass, as admeasurement with a spoon is dangerous; the oxygen rapidly oxydating the metal of which it is composed, and by that means conveying into the stomach a poisonous fluid from which death might ensue."

Besides the internal use of oxygenated muriatic acid, Mr. Braithwaite, following Guyton Morveau and others, recommends the vapour of this acid for destroying contagious miasmata, even in rooms where the sick are present, without the slightest inconvenience.

The gaseous oxygenant, he observes, possessed of amazing expansibility, diffuses itself over the most extensive apartments, leaving nothing untouched, and touching nothing it does not

appropriate, rapidly oxydating metallic bodies, particularly iron and steel, which on that account should be removed; and radically destroying the most offensive odours, thereby rendering innocuous perhaps deadly contagious poisons.

To completely purify any apartment where a patient suffers in the scarlet fever, or any other contagious disease, so as to render it perfectly safe, not only to the attendants, but to the rest of the family, take a china tea-cup and saucer; put into the tea-cup two ounces of common culinary salt, and half an ounce of the black oxyd of manganese, previously powdered, with one ounce of water; then take an ounce and a half of *sulphuric acid* (spirit of vitriol or vitriolic acid), and pour a little of it now and then into the tea-cup among the other ingredients. Immediately an amazing quantity of oxygenated muriatic acid gas will be disengaged and diffused through the apartment. This should be suffered to remain only a few minutes, removing it out of the room into the staircase, by which means the whole house will become impregnated with this geous oxygenant. It will be proper to take it into the room frequently in the course of the day, adding to it a little fresh *sulphuric acid*, and then replacing it in its former situation.

By this simple plan, any prudent and attentive nurse may, with the utmost facility and safety, destroy contagion in any private apartment, or ward of an hospital. The gas extricated from common salt by sulphuric acid has been employed in the Royal Infirmary at Edinburgh with very great benefit.

OF THE BILIOUS FEVER.

When a continual, remitting, or intermitting fever is accompanied with a frequent or copious evacuation of bile, either by vomit or stool, the fever is denominated bilious. In Britain the bilious fever generally makes its appearance about the end of summer, and ceases towards the approach of winter. It is most frequent and fatal in warm countries, especially where the soil is marshy, and when great rains are succeeded by sultry heats. Persons who work without doors, lie in camps, or who are exposed to the night air, are most liable to this kind of fever.

If there are symptoms of inflammation at the beginning of this fever, it will be necessary to bleed, and to put the patient upon the cool diluting regimen recommended in the inflammatory fever.—The saline draught may likewise be frequently administered, and the patient's body kept open by clysters or mild purgatives. But if the fever should remit or intermit, bleeding will seldom be necessary. In this case a vomit may be administered, and, if the body be bound, a gentle purge; after which, the Peruvian bark will generally complete the cure.

In case of a violent looseness, the patient must be supported with chicken broths, jellies of hartshorn, and the like; and he may use the *compound decoction of chalk* for his ordinary drink. If a bloody flux should accompany this fever, it must be treated in the manner recommended under the article *Dysentery*

When there is a burning heat, and the patient does not sweat, that evacuation may be promoted by giving him three, four, or six times a-day, a table-spoonful of *acetated water of ammonia* (Mindererus's spirit) mixed in a cup of his ordinary drink.

If the bilious fever be attended with the nervous, malignant, or putrid symptoms, which is sometimes the case, the patient must be treated in the same manner as directed under these diseases.

After this fever, proper care is necessary to prevent a relapse. For this purpose the patient, especially towards the end of autumn, ought to continue the use of the Peruvian Bark for some time after he is well. He should likewise abstain from all trashy fruits, new liquors, and every kind of flatulent aliment.

CHAP. XXV.

OF THE ERYSIPELAS, OR ST. ANTHONY's FIRE.

THIS disease, which in some parts of Britain is called *the rose*, attacks persons at any period of life, but is most common between the age of thirty and forty. Persons of a sanguine or pletholic habit are most liable to it. It often attacks young people and pregnant women; and such as have once been afflicted with it, are very liable to have it again. Sometimes it is a primary disease, and at other times only a symptom of some other malady. Every part of the body is liable to be attacked by an erysipelas, but it most frequently seizes the legs or face, especially the latter. It is most common in autumn, or when hot weather is succeeded by cold and wet.

CAUSES.——The erysipelas may be occasioned by violent passions or affections of the mind; as fear, anger, &c. When the body has been heated to a great degree, and is immediately exposed to the cold air, so that the perspiration is suddenly checked, an erysipelas will often ensue. It may also be occasioned by drinking to excess, by continuing too long in a warm bath, or by any thing that overheats the blood. If any of the natural evacuations be obstructed, or in too small quantity, it may cause an erysipelas. The same effect will follow from the stoppage of artificial evacuations, as issues, setons, or the like.

The country people in many parts of Britain call this disease a *blast*, and imagine it proceeds from foul air, or ill wind, as they term it. The truth is, they often lie down to rest them, when warm and fatigued, upon the damp ground, where they fall asleep, and lie so long as to catch cold, which occasions the erysipelas. This disease may indeed proceed from other causes, but we may venture to say that nine times out of ten it is occasioned by cold caught after the body has been greatly heated or fatigued.

SYMPTOMS.——The erysipelas attacks with shivering, thirst,

loss of strength, pain in the head and back, heat, restlessness, and a quick pulse; to which may be added vomiting, and sometimes a delirium. On the second, third, or fourth day, the part swells, becomes red, and small pustules appear; at which time the fever generally abates.

When the erysipelas seizes the foot, the parts contiguous swell, the skin shines; and, if the pain be violent, it will ascend to the leg, and will not bear to be touched.

When it attacks the face, it swells, appears red, and the skin is covered with small pustules filled with clear water. One or both eyes are generally closed with a swelling; and there is a difficulty of breathing. If the mouth and nostrils be very dry, and the patient drowsy, there is reason to suspect an inflammation of the brain.

If the erysipelas affects the breast, it swells and becomes exceedingly hard, with great pain, and is apt to suppurate. There is a violent pain in the arm-pit on the side affected, where an abscess is often formed.

If in a day or two the swelling subsides, the heat and pain abate, the colour of the part turns yellow, and the cuticle breaks and falls off in scales, the danger is over.

When the erysipelas is large, deep, and affects a very sensible part of the body, the danger is great. If the red colour changes into a livid or black, it will end in a mortification. Sometimes the inflammation cannot be discussed, but comes to a suppuration; in which case fistulas, a grangrene, or mortification, often ensue.

Such as die of this disease are commonly carried off by the fever, which is attended with difficulty of breathing, and sometimes with a delirium and great drowsiness. They generally die about the seventh or eighth day.

REGIMEN.——In the erysipelas the patient must neither be kept too hot nor too cold, as either of these extremes will tend to make it retreat, which is always to be guarded against. When the disease is mild, it will be sufficient to keep the patient within doors, without confining him to his bed, and to promote the perspiration by diluting liquors, &c.

The diet ought to be slender, and of a moderately cooling and moistening quality, as groat-gruel, panado, chicken or barley-broth, with cooling herbs and fruits, &c. avoiding flesh, fish, strong drink, spices, pickles, and all other things that may heat and inflame the blood: The drink may be barley-water, an infusion of elder-flowers, common whey, and such like.

But if the pulse be low, and the spirits sunk, the patient must be supported with negus, and other things of a cordial nature. His food may be sago-gruel, with a little wine, and nourishing broths, taken in small quantities, and often repeated. Great care, however, must be taken not to overheat him.

MEDICINE.——In this disease much mischief is often done by medicine, especially by external applications. People, when they see an inflammation, immediately think that something

ought to be applied to it. This indeed is necessary in large phlegmons; but in an erysipelas the safer course is to apply nothing. Almost all ointments, salves, and plaisters, being of a greasy nature, tend rather to obstruct and repel, than promote any discharge from the part. At the beginning of this disease it is neither safe to promote a suppuration, nor to repel the matter too quickly. The erysipelas in many respects resembles the gout, and is to be treated with the greatest caution. Fine wool, or very soft flannel, are the safest applications to the part. These not only defend it from the external air, but likewise promote the perspiration, which has a great tendency to carry off the disease. In Scotland the common people generally apply a mealy cloth to the parts affected, which is far from being improper.

It is common to bleed in the erysipelas; but this likewise requires caution. If however the fever be high, the pulse hard and strong, and the patient vigorous, it will be proper to bleed; but the quantity must be regulated by these circumstances, and the operation repeated as the symptoms may require. If the patient has been accustomed to strong liquors, and the disease attacks his head, bleeding is absolutely necessary.

Bathing the feet and legs frequently in lukewarm water, when the disease attacks the face or brain, has an excellent effect. It tends to make a derivation from the head, and seldom fails to relieve the patient. When bathing proves ineffectual, poultices, or sharp sinapisms, may be applied to the soles of the feet, for the same purpose.

In cases where bleeding is requisite, it is likewise necessary to keep the body open. This may be effected by emollient clysters, or small doses of nitre and rhubarb. Some indeed, recommend very large doses of nitre in the erysipelas; but nitre seldom sits easy on the stomach when taken in large doses. It is, however, one of the best medicines when the fever and inflammation run high. Half a drachm of it, with four or five grains of rhubarb, may be taken in the patient's ordinary drink four times a-day.

When the erysipelas leaves the extremities, and seizes the head so as to occasion a delirium or stupor, it is absolutely necessary to open the body. If clysters and mild purgatives fail to have this effect, stronger ones must be given. Blistering plaisters must likewise be applied to the neck, or behind the ears, and sharp cataplasms laid to the soles of the feet.

When the inflammation cannot be discussed, and the part has a tendency to ulcerate, it will then be proper to promote suppuration, which may be done by the application of ripening poultices, with saffron, warm fomentations, and such like.

When the black, livid, or blue colour of the part shews a tendency to mortification, the Peruvian bark must be administered. It may be taken along with acids, as recommended in the small-pox, or in any other form more agreeable to the patient. It must not, however, be trifled with, as the patient's life is at stake. A drachm may be given every two hours, if the symptoms be

threatening, and cloths dipped in warm *camphorated spirit of wine*, or the tincture of myrrh and aloes, may be applied to the part, and frequently renewed. It may likewise be proper in this case, to apply poultices of the bark, or to foment the part affected with a strong decoction of it.

In what is commonly called the *scorbutic erysipelas*, which continues for a considerable time, it will only be necessary to give gentle laxatives, and such things as purify the blood and promote the perspiration. Thus, after the inflammation has been checked by opening medicines, the *decoction of woods* may be drank, after which a course of bitters will be proper.

But the editor must here observe, that in the form in which erysipelatous inflammation often occurs now, it is in many cases most successfully combated by the exhibition of the cinchona. Take decoction of Peruvian bark one pint, compound tincture of Peruvian bark one ounce, powder of Peruvian bark half an ounce, mixed: the dose four table spoonfuls every four or six hours.

Such as are liable to frequent attacks of the erysipelas ought carefully to guard against all violent passions; to abstain from strong liquors, and all fat, viscid, and highly nourishing food. They should likewise take sufficient exercise, carefully avoiding the extremes of heat or cold. Their food should consist chiefly of milk, and such fruits, herbs, and roots, as are of a cooling quality; and their drink ought to be small-beer, whey, butter-milk, and such like. They should never suffer themselves to be long costive. If that cannot be prevented by suitable diet, it will be proper to take frequently a gentle dose of rhubarb, cream of tartar, the lenitive electuary, or some other mild purgative.

If the erysipelas attack the lower extremities, dissolve two ounces of *vitriolated magnesia*, and one drachm of calcined magnesia, in two pints of boiling water; take six table-spoonfuls, or a gill, every morning. If the patient is of a costive habit, the dose may be doubled. Bathe the affected leg, and apply linen cloths frequently moistened with the following lotion: good vinegar four ounces, *acetated ceruse* (commonly called sugar of lead) two drachms, spring water two pints, mixed.

CHAP. XXVI.

OF THE PHRENITIS, OR INFLAMMATION OF THE BRAIN.

THIS is sometimes a primary disease, but oftener only a symptom of some other malady; as the inflammatory, eruptive, or spotted fever, &c. It is very common, however, as a primary disease in warm climates, and is most incident to persons about the prime or vigour of life. The passionate, the studious,

and those whose nervous system is irritable in a high degree, are most liable to it.

CAUSES.——This disease is often occasioned by night watching, especially when joined with hard study; it may likewise proceed from hard drinking, anger, grief, or anxiety. It is often occasioned by the stoppage of usual evacuations; as the bleeding piles in men, the customary discharges of women, &c. Such as imprudently expose themselves to the heat of the sun, especially by sleeping without doors in a hot season, with their heads uncovered, are often suddenly seized with an inflammation of the brain, so as to awake quite delirious. When repellents are imprudently used in an erysipelas, an inflammation of the brain is sometimes the consequence. It may likewise be occasioned by external injuries, as blows or bruises upon the head, &c.

SYMPTOMS.——The symptoms which usually precede a true inflammation of the brain are pain of the head, redness of the eyes, a violent flushing of the face, disturbed sleep, or a total want of it, great dryness of the skin, costiveness, a retention of urine, a small dropping of blood from the nose, singing of the ears, and extreme sensibility of the nervous system.

When the inflammation is formed, the symptoms in general are similar to those of the inflammatory fever. The pulse indeed is often weak, irregular, and trembling; but sometimes it is hard and contracted. When the brain itself is inflamed, the pulse is always soft and low; but when the inflammation only affects the integuments of the brain, viz. the dura and pia mater, it is hard. A remarkable quickness of hearing is a common symptom of this disease; but that seldom continues long. Another usual symptom is a great throbbing or pulsation in the arteries of the neck and temples. Though the tongue is often black and dry, yet the patient seldom complains of thirst, and even refuses drink. The mind chiefly runs upon such objects as have before made a deep impression on it; and sometimes, from a sullen silence, the patient becomes all of a sudden quite outrageous.

A constant trembling and starting of the tendons is an unfavourable symptom, as are also a suppression of urine; a total want of sleep; a constant spitting; a grinding of the teeth; which last may be considered as a kind of convulsion. When a phrenitis succeeds an inflammation of the lungs, of the intestines, or of the throat, &c. it is owing to a translation of the disease from these parts to the brain, and generally proves fatal. This shews the necessity of proper evacuations, and the danger of repellents in all inflammatory diseases.

The favourable symptoms are, a free perspiration, a copious discharge of blood from the nose, the bleeding piles, a plentiful discharge of urine which lets fall a copious sediment. Sometimes the disease is carried off by a looseness, and in women by an excessive flow of the menses.

As this disease often proves fatal in a few days, it requires the

most speedy applications. When it is prolonged, or improperly treated, it sometimes ends in madness, or a kind of stupidity which continues for life.

In the cure, two things are chiefly to be attended to, viz. to lessen the quantity of blood in the brain, and to retard the circulation towards the head.

REGIMEN.——The patient ought to be kept very quiet. Company, noise, and every thing that affects the senses or disturbs the imagination, increases the disease. Even too much light is hurtful; for which reason the patient's chamber ought to be a little darkened, and he should neither be kept too hot nor cold. It is not however necessary to exclude the company of an agreeable friend, as this has a tendency to sooth and quiet the mind. Neither ought the patient to be kept too much in the dark, lest it should occasion a gloomy melancholy, which is too often the consequence of this disease.

The patient must, as far as possible, be soothed and humoured in every thing. Contradiction will ruffle his mind, and increase his malady. Even when he calls for things which are not to be obtained, or which might prove hurtful, he is not to be positively denied them, but rather put off with the promise of having them as soon as they can be obtained, or by some other excuse. A little of any thing that the mind is set upon, though not quite proper, will hurt the patient less than a positive refusal. In a word, whatever he was fond of, or used to be delighted with, when in health, may here be tried; as pleasing stories, soft music, or whatever has a tendency to sooth the passions and compose the mind. Boerhaave proposes several mechanical experiments for this purpose; as the soft noise of water distilling by drops into a basin, and the patient trying to reckon them, &c. Any uniform sound, if low and continued, has a tendency to procure sleep, and consequently may be of service.

The aliment ought to be light, consisting chiefly of farinaceous substances; as panado, and water-gruel, sharpened with jelly of currants, or juice of lemons, ripe fruits roasted or boiled, jellies, preserves, &c. The drink small, diluting, and cooling; as whey, barley-water, or decoctions of barley and tamarinds, which latter not only render the liquor more palatable, but likewise more beneficial, as they are of an opening nature.

MEDICINE.——In an inflammation of the brain, nothing more certainly relieves the patient than a free discharge of blood from the nose. When this comes of its own accord, it is by no means o be stopped, but rather promoted, by applying cloths dipped in warm water to the part. When bleeding at the nose does not happen spontaneously, it may be provoked, by putting a straw or any sharp body up the nostrils.

Bleeding in the temporal arteries greatly relieves the head; but as this operation cannot always be performed, we should recommend in its stead bleeding in the jugular veins. When the patient s pulse and spirits are so low, that he cannot bear bleeding

with the lancet, leeches may be applied to the temples. These not only draw off the blood more gradually, but, by being applied nearer to the part affected, generally give more immediate relief.

A discharge of blood from the hæmorrhoidal veins is likewise of great service, and ought by all means to be promoted. If the patient has been subject to the bleeding piles, and that discharge has been stopped, every method must be tried to restore it; as the application of leeches to the parts, setting over the steams of warm-water, sharp clysters, or suppositories made of honey, aloes, and rock-salt.

If the inflammation of the brain be occasioned by the stoppage of evacuation either natural or artificial, as the menses, issues, setons, or such like, all means must be used to restore them as soon as possible, or to substitute others in their stead.

The patient's body must be kept open by stimulating clysters or smart purges; and small quantities of nitre ought frequently to be mixed with his drink. Two or three drachms, or more, if the case be dangerous, may be used in the space of twenty-four hours.

The head should be shaved and frequently rubbed with vinegar and rose-water. Cloths dipped in this mixture may likewise be applied to the temples. Cold water may be poured upon it; or even ice applied. The feet ought frequently to be bathed in lukewarm water, and soft poultices of bread and milk may be kept constantly applied to them.

If the disease proves obstinate, and does not yield to these medicines, it will be necessary to apply a blistering-plaster to the whole head.

Smart purges, as calomel in doses of five to eight grains, and opiates, are also sometimes necessary in this disease.

CHAP. XXVII.

OF THE OPHTHALMIA, OR INFLAMMATION OF THE EYES.

THIS disease may be occasioned by external injuries; as blows, burns, bruises, and the like. It may likewise proceed from dust, quick-lime, or other substances, getting into the eyes. It is often caused by the stoppage of customary evacuations; as the healing of old sores, drying up of issues, the suppressing of gentle morning sweats, or of the sweating of the feet, &c. Long exposure to the night air, especially in cold northerly winds, or whatever suddenly checks the perspiration, especially after the body has been much heated, is very apt to cause an inflammation of the eyes. Viewing snow or other white bodies for a long time, or looking steadfastly at the sun, a clear fire, or any bright object, will like-

wise occasion this malady. A sudden transition from darkness to very bright light will often have the same effect.

Nothing more certainly occasions an inflammation of the eyes than night-watching, especially reading or writing by candle-light. Drinking spirituous liquors, and excess of venery, are likewise very hurtful to the eyes. The acrid fumes of metals, and of several kinds of fuel, are also pernicious. Sometimes an inflammation of the eyes proceeds from a venereal taint, and often from a scrophulous or gouty habit. It may likewise be occasioned by hairs in the eye-lids turning inwards, and hurting the eyes. Sometimes the disease is epidemic, especially after wet seasons; and I have frequently known it prove infectious, particularly to those who lived in the same house with the patient.

It may be occasioned by moist air, or living in low damp houses, especially in persons who are not accustomed to such situations. In children it often proceeds from imprudently drying up of scabbed heads, a running behind the ears, or any other discharge of that kind. Inflammation of the eyes often succeed the small-pox or measles, especially in children of a scrophulous habit.

SYMPTOMS.——An inflammation of the eyes is attended with acute pain, heat, redness, and swelling. The patient is not able to bear the light, and sometimes he feels a pricking pain, as if his eyes were pierced with a thorn. Sometimes he imagines his eyes are full of motes, or thinks he sees flies dancing before him. The eyes are filled with a scalding rheum, which rushes forth in great quantities, whenever the patient attempts to look up. The pulse is generally quick and hard, with some degree of fever. When the disease is violent, the neighbouring parts swell, and there is a throbbing or pulsation in the temporal arteries, &c.

A slight inflammation of the eyes, especially from an external cause, is easily cured; but when the disease is violent, and continues long, it often leaves specks upon the eyes, or dimness of sight, and sometimes total blindness.

If the patient be seized with a looseness, it has a good effect; and when the inflammation passes from one eye to another, as it were by infection, it is no unfavourable symptom. But when the disease is accompanied with a violent pain of the head, and continues long, the patient is in danger of losing his sight.

REGIMEN.——The diet, unless in scrophulous cases, can hardly be too spare, especially at the beginning. The patient must abstain from every thing of a heating nature. His food should consist chiefly of mild vegetables, weak broths, and gruels. His drink may be barley-water, balm-tea, common whey, and such like.

The patient's chamber must be darkened, or his eyes shaded by a cover, so as to exclude the light, but not to press upon the eyes. He should not look at a candle, the fire, or any luminous object; and ought to avoid all smoke, as the fumes of tobacco, or any thing that may cause coughing, sneezing, or vomiting. He

should be kept quiet, avoiding all violent efforts, either of body or mind, and encouraging sleep as much as possible.

MEDICINE.——This is one of those diseases wherein great hurt is often done by external applications. Almost every person pretends to be possessed of a remedy for the cure of sore eyes. These remedies generally consist of eye-waters and ointments, with other external applications, which do mischief twenty times for once they do good. People ought therefore to be very cautious how they use such things, as even the pressure upon the eyes often increases the malady.

Bleeding, in a violent inflammation of the eyes, is always necessary. This should be performed as near the part affected as possible. An adult may lose ten or twelve ounces of blood from the jugular vein, and the operation may be repeated according to the urgency of the symptoms. If it should not be convenient to bleed in the neck, the same quantity may be let from the arm, or any other part of the body.

Leeches are often applied to the temples, or under the eyes, with good effect. The wounds must be suffered to bleed for some hours, and if the bleeding stop soon, it may be promoted by the application of cloths dipt in warm water. In obstinate cases, it will be necessary to repeat this operation several times.

Opening and diluting medicines are by no means to be neglected. The patient may take a small dose of *vitriolated natron* (Glauber's salts), and cream of tartar, every second or third day, or a decoction of tamarinds with senna. If these be not agreeable, gentle doses of rhubarb and nitre, a little of the lenitive electuary, or any other mild purgative, will answer the same end. The patient at the same time must drink freely of water-gruel, tea, whey, or any other weak diluting liquor. He ought likewise to take, at bed time, a large draught of very weak wine-whey, in order to promote perspiration. His feet and legs must frequently be bathed in lukewarm water, and his head shaved twice or thrice a week, and afterwards washed in cold water. This has often a remarkably good effect.

If the inflammation does not yield to these evacuations, blistering-plasters must be applied to the temples, behind the ears, or upon the neck, and kept open for some time by the mild blistering ointment. I have seldom known these, if long enough kept open, fail to remove the most obstinate inflammation of the eyes; but for this purpose it is often necessary to continue the discharge for several weeks.

When the disease has been of long standing, I have seen very extraordinary effects from a seton in the neck, or between the shoulders, especially the latter. It should be put upwards and downwards, or in the direction of the spine, and in the middle between the shoulder blades. It may be dressed twice a day with *ointment of yellow wax* (yellow basilicon). I have known patients, who had been blind for a considerable time, recover sight by means of a seton placed as above. When the seton is put across the

neck, it soon wears out, and is both more painful and troublesome than between the shoulders; besides, it leaves a disagreeable mark, and does not discharge so freely.

When the heat and pain of the eyes are very great, a poultice of bread and milk, softened with sweet oil or fresh butter, may be applied to them, at least all night; and they may be bathed with lukewarm milk and water in the morning.

If the patient cannot sleep, which is sometimes the case, he may take twenty or thirty drops of laudanum, or two spoonfuls of the syrup of white poppies, over night, more or less, according to his age, or the violence of the symptoms.

After the inflammation is gone off, if the eyes still remain weak and tender, they may be bathed every night and morning with cold water and a little brandy, six parts of the former to one of the latter. A method should be contrived by which the eye can be quite immersed in the brandy and water, where it should be kept for some time. I have generally found this, or cold water and vinegar, as good a strengthener of the eyes as any of the most celebrated collyriums.

When an inflammation of the eyes proceeds from a scrophulous habit, it generally proves very obstinate. In this case the patient's diet must not be too low, and he may be allowed to drink small negus, or now and then a glass of wine. The most proper medicine is the Peruvian bark, which may be either given in substance, or prepared in the following manner:

Take an ounce of the *cinchona* in powder, with two drachms of Winter's bark, and boil them in an English quart of water to a pint: when it has boiled nearly long enough, add half an ounce of liquorice root sliced. Let the liquor be strained. Two, three, or four table-spoonfuls, according to the age of the patient, may be taken three or four times a-day. It is impossible to say how long this medicine should be continued, as the cure is sooner performed in some than in others; but in general it requires a considerable time to produce any lasting effects.

Dr. Cheyne says, 'that *quicksilver with sulphur* (Æthiop's mineral) never fails in obstinate inflammations of the eyes, even scrophulous ones, if given in a sufficient dose, and duly persisted in.' There is no doubt but this and other preparations of mercury may be of singular service in ophthalmias of long continuance, but they ought always to be administered with the greatest caution, or by persons of skill in physic.

It will be proper frequently to look into the eyes, to see if any hairs be turned inwards or pressing upon them. These ought to be removed by plucking them out with a pair of small pincers.

Those who are liable to frequent returns of this disease ought constantly to have an issue in one or both arms. Bleeding or purging in the spring and autumn will be very beneficial to such persons. They ought likewise to live with the greatest regularity, avoiding strong liquor and every thing of a heating quality. Above all, let them avoid the night-air and late studies.

As most people are fond of using eye-waters and ointments in this and other diseases of the eyes, we have inserted some of the most approved forms of these medicines in the Appendix. See Appendix, *Eye-water* and *Eye-salve.*

CHAP. XXVIII.

OF THE QUINSEY, OR INFLAMMATION OF THE THROAT.

THIS disease is very common in Britain, and is frequently attended with great danger. It prevails in the winter and spring, and is most fatal to young people of a sanguine temperament.

CAUSES.——In general it proceeds from the same causes as other inflammatory disorders, viz. an obstructed perspiration, or whatever heats or inflames the blood. An inflammation of the throat is often occasioned by omitting some part of the covering usually worn about the neck, by drinking cold liquor when the body is warm, by riding or walking against a cold northerly wind, or any thing that greatly cools the throat and parts adjacent. It may likewise proceed from the neglect of bleeding, purging, or any customary evacuation.

Singing, speaking loud and long, or whatever strains the throat, may likewise cause an inflammation of that organ. I have often known the quinsey prove fatal to jovial companions, who, after sitting long in a warm room, drinking hot liquors, and singing with vehemence, were so imprudent as to go abroad in the cold night-air. Sitting with wet feet, or keeping on wet clothes, are very apt to occasion this malady. It is likewise frequently occasioned by continuing long in a moist place, sitting near an open window, sleeping in a damp bed, sitting in a room that has been newly plastered, &c. I know people who never fail to have a sore throat if they sit even but a short time in a room that has been lately washed.

Acrid or irritating food may likewise inflame the throat, and occasion a quinsey. It may also proceed from bones, pins, or other sharp substances, sticking in the throat; or from the caustic fumes of metals, and minerals, as arsenic, antimony, &c. taken in by the breath. This disease is sometimes epidemic and infectious.

SYMPTOMS.——The inflammation of the throat is evident from inspection, the parts appearing red and swelled; besides, the patient complains of pain in swallowing. His pulse is quick and hard, with other symptoms of a fever. If blood be let, it is generally covered with a tough coat of a whitish colour, and the patient spits a tough phlegm. As the swelling and inflammation increase, the breathing and swallowing become more difficult; the pain affects the ears: the eyes generally appear red; and the face

swells. The patient is often obliged to keep himself in an erect posture, being in danger of suffocation: there is a constant nausea, or inclination to vomit; and the drink, instead of passing into the stomach, is often returned by the nose. The patient is sometimes starved at last, merely from an inability to swallow any kind of food.

When the breathing is laborious with straitness of the breast, and anxiety, the danger is great. Though the pain in swallowing be very great, yet while the patient breathes easy, there is not so much danger. An external swelling is no unfavourable symptom; but if it suddenly falls, and the disease affects the breast, the danger is very great. When a quinsey is the consequence of some other disease which has already weakened the patient, his situation is dangerous. A frothing at the mouth, with a swelled tongue, a pale ghastly countenance, and coldness of the extremities, are fatal symptoms.

REGIMEN.——The regimen in this disease is in all respects the same as in the pleurisy, or peripneumony. The food must be light, and in small quantities, and the drink plentiful, weak, and diluting, mixed with acids.

It is highly necessary that the patient be kept easy and quiet. Violent affections of the mind, or great efforts of the body, may prove fatal. He should not even attempt to speak but in a low voice. Such a degree of warmth as to promote a constant, gentle sweat, is proper. When the patient is in bed, his head ought to be raised a little higher than usual.

It is peculiarly necessary that the neck be kept warm: for which purpose several folds of soft flannel may be wrapt round it. That alone will often remove a slight complaint of the throat, especially if applied in due time. We cannot here omit observing the propriety of a custom which prevails among the peasants in Scotland. When they feel any uneasiness of the throat, they wrap a stocking about it all night. So effectual is this remedy, that in many places it passes for a charm, and the stocking is applied with particular ceremonies: the custom, however, is undoubtedly a good one, and should never be neglected. When the throat has been thus wrapped up all night, it must not be exposed to the cold air through the day, but a handkerchief or a piece of flannel kept about it till the inflammation be removed.

The jelly of black currants is a medicine very much in esteem for complaints of the throat; and indeed it is of some use. It should be almost constantly kept in the mouth, and swallowed down leisurely. It may likewise be mixed in the patient's drink, or taken any other way. When it cannot be obtained, the jelly of red currants, or of mulberries, may be used in its stead.

Gargles for the throat are very beneficial. They may be made of sage-tea, with a little vinegar and honey, or by adding to half an English pint of the pectoral decoction, two or three spoonfuls of honey, and the same quantity of currant jelly. This may be used three or four times a-day; and if the patient be troubled with tough

viscid phlegm, the gargle may be rendered more sharp and cleansing by adding to it a tea-spoonful of the spirit of *sal ammoniac.* Some recommend gargles made of a decoction of the leaves or bark of the black currant-bush; but where the jelly can be had, these are unnecessary.

There is no disease wherein the benefit of bathing the feet and legs in lukewarm water is more apparent; that practice ought, therefore, never to be neglected. If people were careful to keep warm, to wrap up their throats with flannel, to bathe their feet and legs in warm water, and to use a spare diet, with diluting liquors, at the beginning of this disease, it would seldom proceed to a great height, or be attended with any danger; but when these precautions are neglected, and the disease becomes violent, it is proper to employ more powerful medicines.

MEDICINE.——An inflammation of the throat being a most acute and dangerous distemper, which sometimes takes off the patient very suddenly, it will be proper, as soon as the symptoms appear, to bleed in the arm, or rather in the jugular vein, and to repeat the operation as circumstances require.

The body should likewise be kept gently open. This may either be done by giving the patient for his ordinary drink a decoction of figs and tamarinds, or small doses of rhubarb and nitre, as recommended in the erysipelas. These may be increased according to the age of the patient, and repeated till they have the desired effect.

I have often known very good effects from a bit of *sal prunel*, or purified nitre, held in the mouth, and swallowed down as it melted. This promotes the discharge of *saliva*, by which means it answers the end of a gargle, while at the same time it abates the fever, by promoting the discharge of urine, &c.

The throat ought likewise to be rubbed twice or thrice a-day with a little of the volatile liniment. This seldom fails to produce some good effects. At the same time the neck ought to be carefully covered with wool or flannel, to prevent the cold from penetrating the skin, as this application renders it very tender. Many other external applications are recommended in this disease, as a swallow's nest, poultices made of the fungus called Jew's ears, album Græcum, &c. But as we do not look upon any of these to be preferable to a common poultice of bread and milk, we shall take no farther notice of them.

Dr. Home recommends the gum-guaiacum as a specific in this disease. Half a drachm of the gum in powder may be made into an electuary with the rob of elder-berries, or the jelly of currants for a dose, and repeated occasionally.

Blistering upon the neck or behind the ears in violent inflammations of the throat is very beneficial; and in bad cases it will be necessary to lay a blistering-plaster quite across the throat, so as to reach from ear to ear. After the plasters are taken off, the parts ought to be kept running by the application of issue ointment, till the inflammation is gone; otherwise, upon their drying up, the patient will be in danger of a relapse.

When the patient has been treated as above, a suppuration seldom happens. This, however, is sometimes the case, in spite of all endeavours to prevent it. When the inflammation and swelling continue, and it is evident that a suppuration will ensue, it ought to be promoted by drawing the steam of warm water into the throat through a tunnel, or the like. Soft poultices ought likewise to be applied outwardly, and the patient may keep a roasted fig constantly in his mouth.

It sometimes happens, before the tumour breaks, that the swelling is so great, as entirely to prevent any thing from getting down into the stomach. In this case the patient must inevitably perish, unless he can be supported in some other way. This can only be done by nourishing clysters of broth, or gruel with milk, &c. Patients have often been supported by these for several days, till the tumour has broke; and afterwards they have recovered.

Not only the swallowing, but the breathing, is often prevented by the tumour. In this case nothing can save the patient's life but opening the *trachea* or wind-pipe. As that has been often done with success, no person, in such desperate circumstances ought to hesitate a moment about the operation; but as it can only be performed by a surgeon, it is not necessary here to give any directions about it.

When a difficulty of swallowing is not attended with an acute pain or inflammation, it is generally owing to an obstruction of the glands about the throat, and only requires that the part be kept warm, and the throat frequently gargled with something that may gently stimulate the glands, as a decoction of figs with vinegar and honey; to which may be added a little mustard, or a small quantity of spirits. But this gargle is never to be used where there are signs of an inflammation. This species of *angina* has various names among the common people, as *the pap of the throat*, the falling down of the *almonds of the ears*, &c. Accordingly, to remove it, they lift the patient up by the hair of the head, and thrust their fingers under his jaw, &c.; all which practices are at best useless, and often hurtful.

Those who are subject to inflammations in the throat, in order to avoid that disease, ought to live temperate. Such as do not choose to observe this rule, must have frequent recourse to purging and other evacuations, to discharge the superfluous humours. They ought likewise to beware of catching cold, and should abstain from aliment and medicines of an astringent or stimulating nature.

Violent exercise, by increasing the motion and force of the blood, is apt to occasion an inflammation of the throat, especially if cold liquor be drank immediately after it, or the body suffered suddenly to cool. Those who would avoid this disease ought, therefore, after speaking aloud, singing, running, drinking warm liquor, or doing any thing that may strain the throat, or increase the circulation of the blood towards it, to take care to cool gradually, and to wrap some additional covering about their necks.

I have often known persons who have been subject to sore throats, entirely freed from that complaint by only wearing a riband, or a bit of flannel, constantly about their necks, or by wearing thicker shoes, a flannel waistcoat, or the like. These may seem trifling, but they have great effect. There is danger indeed in leaving them off after a person has been accustomed to them; but surely the inconvenience of using such things for life is not to be compared with the danger which may attend the neglect of them.

Sometimes, after an inflammation, the glands of the throat continue swelled, and become hard and callous. This complaint is not easily removed, and is often rendered dangerous by the too frequent application of strong stimulating and styptic medicines. The best method is to keep it warm, and to gargle it twice a-day with a decoction of figs, sharpened a little with the elixir of vitriol, or with good vinegar: the vinegar procured from pickled walnuts is excellent for this purpose; it may be diluted with water and honey.

OF THE MALIGNANT QUINSEY, OR PUTRID ULCEROUS SORE THROAT.

THIS kind of quinsey is but little known in the northern parts of Britain, though, for some time past, it has been fatal in the more southern counties. Children are more liable to it than adults females than males, and the delicate than those who are hardy and robust. It prevails chiefly in autumn, and is most frequent after a long course of damp or sultry weather.

CAUSES.——This is evidently a contagious distemper, and is generally communicated by infection. Whole families, and even entire villages, often receive the infection from one person. This ought to put people upon their guard against going near such patients as labour under the disorder; as by that means they endanger not only their own lives, but likewise those of their friends and connexions. Whatever tends to produce putrid or malignant fevers, may likewise occasion the putrid ulcerous sore throat, as unwholesome air, damaged provisions, neglect of cleanliness, or the like.

SYMPTOMS.——It begins with alternate fits of shivering and heat. The pulse is quick, but low and unequal, and generally continues so through the whole course of the disease. The patient complains greatly of weakness and oppression of the breast: his spirits are low, and he is apt to faint away when set upright; he is troubled with a nausea, and often with a vomiting or purging The two latter are most common in children. The eyes appear red and watery, and the face swells. The urine is at first pale and crude; but, as the disease advances, it turns more of a yellowish colour. The tongue is white, and generally moist, which distinguishes this from an inflammatory disease. Upon looking into the throat, it appears swelled, and of a florid red colour

Pale or ash-coloured spots, however, are here and there interspersed; and sometimes one broad patch or spot of an irregular figure, and pale white colour, surrounded with florid red, only appears. These whitish spots or sloughs cover so many ulcers.

An efflorescence or eruption upon the neck, arms, breast, and fingers, about the second or third day, is a common symptom of this disease. When it appears, the purging and vomiting generally cease.

There is often a slight degree of delirium, and the face frequently appears bloated, and the inside of the nostrils red and inflamed. The patient complains of a disagreeable putrid smell, and his breath is very offensive.

The putrid ulcerous sore throat may be distinguished from the inflammatory by the vomiting and looseness with which it is generally ushered in; the foul ulcers in the throat covered with a white or livid coat; and by the excessive weakness of the patient; with other symptoms of a putrid fever.

Unfavourable symptoms are, an obstinate purging, extreme weakness, dimness of sight, a livid or black colour of the spots, and frequent shiverings, with a weak, fluttering pulse. If the eruption upon the skin suddenly disappears, or becomes of a livid colour, with a discharge of blood from the nose or mouth, the danger is very great.

If a gentle sweat break out about the third or fourth day, and continue with a slow, firm, and equal pulse; if the sloughs cast off in a kindly manner, and appear clean and florid at the bottom; and if the breathing is soft and free, with a lively colour of the eyes, there is reason to hope for a salutary crisis. The malignity of this disease, and the rapidity of its progress, render the best medical advice necessary.

REGIMEN.——The patient must be kept quiet, and for the most part in bed, as he will be apt to faint when taken out of it. His food must be nourishing and restorative; as sago-gruel, with red-wine, jellies, strong broths, &c. His drink ought to be generous, and of an antiseptic quality; as red-wine negus, white-wine whey, and such like.

MEDICINE.——The medicine in this kind of quinsey is entirely different from that which is proper in the inflammatory. All evacuations, as bleeding, purging, &c. which weaken the patient, must be avoided. Cooling medicines, as nitre and cream of tartar, are likewise hurtful. If a laxative is necessary, give the following:—Simple infusion of senna six ounces, *tartarized kali* one ounce, mix and dissolve it in powder of *tartarized antimony* two grains. Of this cathartic mixture give the patient four table spoonfuls: the dose may be repeated every third hour till costiveness is removed. Strengthening cordials alone can be used with safety, and these ought never to be neglected.

If at the beginning there is a great nausea, or inclination to vomit, the patient must drink an infusion of green-tea, camomile-

flowers, or *carduus benedictus*, in order to cleanse the stomach. If these are not sufficient, he may take a few grains of the powder of ipecacuanha, or any other gentle vomit.

If the disease is mild, the throat may be gargled with an infusion of sage and rose leaves; to a gill of which may be added a spoonful or two of honey, and as much vinegar as will make it agreeably acid; but when the symptoms are urgent, the sloughs large and thick, and the breath very offensive, the following gargle may be used.

To six or seven ounces of the pectoral decoction, when boiling, add half an ounce of contrayerva-root; let it boil for some time, and afterwards strain the liquor; to which add two ounces of white-wine vinegar, an ounce of fine honey, and an ounce of the tincture of myrrh. This ought not only to be used as a gargle, but a little of it should frequently be injected with a syringe, to clean the throat, before the patient takes any meat or drink. This method is peculiarly necessary for children, who cannot use a gargle.

It will be of great benefit if the patient frequently receives into his mouth, through an inverted funnel, the steams of warm vinegar, myrrh, and honey.

But when the putrid symptoms run high, and the disease is attended with danger, the only medicine that can be depended upon is the Peruvian bark. It may be taken in substance, if the patient's stomach will bear it. If not, an ounce of bark grossly powdered, with two drachms of Virginian snake-root, may be boiled in an English pint and a half of water to half a pint; to which a tea-spoonful of the elixir of vitriol may be added, and an ordinary tea-cupful taken of it every three or four hours. Blistering-plasters are very beneficial in this disease, especially when the patient's pulse and spirits are low. They may be applied to the throat, behind the ears, or upon the back part of the neck.

Should the vomiting prove troublesome, it will be proper to give the patient two table-spoonfuls of the saline julep every hour. Tea made of mint and a little cinnamon will be very proper for his ordinary drink, especially if an equal quantity of red-port wine be mixed with it; or red-wine negus may be taken freely.

In case of a violent looseness, the size of a nutmeg of the *syrup of white poppies*, or the *confection of catechu*, may be taken two or three times a day, or oftener if necessary.

If a discharge of blood from the nose happens, the steams of warm vinegar may be received up the nostrils frequently; and the drink must be sharpened with *acid of vitriol*, or *infusion of roses*.

In case of a strangury, the belly must be fomented with warm water, and emollient clysters given three or four times a-day.

After the violence of the disease is over, the body should still be

kept open with mild purgatives; as manna, senna, rhubarb, or the like.

If great weakness and dejection of spirits, or night sweats, with other symptoms of a consumption, should ensue, we would advise the patient to continue the use of the Peruvian bark, with the elixir of vitriol, and to take frequently a glass of generous wine. These, together with a milk diet, and riding on horseback, are the most likely means for recovering his strength.

CHAP. XXIX.

OF COLDS AND COUGHS.

IT has been already observed, that colds are the effect of an obstructed perspiration; the common causes of which we have likewise endeavoured to point out, and shall not here repeat them. Neither shall we spend time in enumerating all the various symptoms of colds, as they are pretty generally known. It may not however, be amiss to observe that almost every cold is a kind of fever, which only differs in degree from some of those that have already been treated of.

No age, sex, or constitution, is exempted from this disease; neither is it in the power of any medicine or regimen to prevent it. The inhabitants of every climate are liable to catch cold, nor can even the greatest circumspection defend them at all times from its attacks. Indeed, if the human body could be kept constantly in an uniform degree of warmth, such a thing as catching cold would be impossible; but as that cannot be effected by any means, the perspiration must be liable to many changes. Such changes, however, when small, do not affect the health; but, when great, they must prove hurtful.

When oppression of the breast, a stuffing of the nose, unusual weariness, pain of the head, &c. give ground to believe that the perspiration is obstructed, or, in other words, that the person has caught cold, he ought immediately to lessen his diet, at least the usual quantity of his solid food, and to abstain from all strong liquors. Instead of flesh, fish, eggs, milk, and other nourishing diet, he may eat light bread-pudding, veal or chicken broth, panado, gruels, and such like. His drink may be water gruel sweetened with a little honey; an infusion of balm, or linseed sharpened with the juice of orange or lemon; a decoction of barley and liquorice, with tamarinds, or any other cool, diluting, acid liquor.

Above all, his supper should be light; as small posset, or water gruel sweetened with honey, and a little toasted bread in it. If honey should disagree with the stomach, the gruel may be sweetened with treacle or coarse sugar, and sharpened with the jelly of currants. Those who have been accustomed to generous liquors may take wine-whey instead of gruel, which may be sweetened as above.

The patient ought to lie longer than usual a-bed, and to encourage a gentle sweat, which is easily brought on towards morning, by drinking tea, or any kind of warm diluting liquor. I have often known this practice carry off a cold in a day, which in all probability, had it been neglected, would have cost the patient his life, or have confined him for some months. Would people sacrifice a little time to ease and warmth, and practice a moderate degree of abstinence when the first symptoms of a cold appear, we have reason to believe that most of the bad effects which flow from an obstructed perspiration might be prevented. But after the disease has gathered strength by delay, all attempts to remove it often prove vain. A pleurisy, a peripneumony, or a fatal consumption of the lungs, are the common effects of colds which have been either totally neglected or treated improperly.

Many attempt to cure a cold by getting drunk: but this, to say no worse of it, is a very hazardous experiment. No doubt it may sometimes succeed, by suddenly restoring the perspiration; but when there is any degree of inflammation, which is frequently the case, strong liquors, instead of removing the malady, will increase it. By this means a common cold may be converted into an inflammatory fever.

When those who labour for their daily bread have the misfortune to catch cold, they cannot afford to lose a day or two, in order to keep themselves warm, and take a little medicine; by which means the disorder is often so aggravated as to confine them for a long time, or even to render them ever after unable to sustain hard labour. But even such of the labouring poor as can afford to take care of themselves, are often too hardy to do it; they affect to despise colds, and as long as they can crawl about, scorn to be confined by what they call a *common cold.* Hence it is, that colds destroy such numbers of mankind. Like an enemy despised, they gather strength from delay, till at length they become invincible. We often see this verified in travellers, who, rather than lose a day in the prosecution of their business, throw away their lives by pursuing their journey, even in the severest weather, with this disease upon them.

It is certain, however, that colds may be too much indulged.—When a person, for every slight cold, shuts himself up in a warm room, and drinks great quantities of warm liquor, it may occasion such a general relaxation of the solids as will not be easily removed. It will therefore be proper, when the disease will permit, and the weather is mild, to join to the regimen mentioned above gentle exercise; as walking, riding on horseback, or in a carriage, &c. An obstinate cold, which no medicine can remove, will yield to gentle exercise and a proper regimen of the diet.

Bathing the feet and legs in warm water has a great tendency to restore the perspiration. But care must be taken that the water be not too warm, otherwise it will do hurt. It should never be much warmer than the blood, and the patient should go immediately to bed after using it. Bathing the feet in warm water, lying in bed,

and drinking warm water-gruel, or other weak liquors, will sooner take off a spasm, and restore the perspiration, than all the hot sudorific medicines in the world. This is all that is necessary for removing a common cold; and if this course be taken at the beginning, it will seldom fail.

But when the symptoms do not yield to abstinence, warmth, and diluting liquors, there is reason to fear the approach of some other disease, as an inflammation of the breast, an ardent fever, or the like. If the pulse therefore be hard and frequent, the skin hot and dry, and the patient complains of his head or breast, it will be necessary to bleed, and to give the cooling powders recommended in the scarlet fever every three or four hours, till they give a stool.

It may likewise be proper to put a blistering plaster on the back, to give two table-spoonfuls of the saline mixture every two hours, and in short, to treat the patient in all respects as for a slight fever. I have often seen this course, when observed at the beginning, remove the complaint in two or three days, when the patient had all the symptoms of an approaching ardent fever, or an inflammation of the breast.

The chief secret of preventing colds lies in avoiding, as far as possible, all extremes either of heat or cold, and in taking care, when the body is heated, to let it cool gradually. These and other circumstances relating to this important subject are so fully treated of under the article *Obstructed Perspiration*, that it is needless here to resume the consideration of them.

OF A COMMON COUGH.

A COUGH is generally the effect of a cold which has either been improperly treated, or entirely neglected. When it proves obstinate, there is always reason to fear the consequences, as this shews a weak state of the lungs, and is often the forerunner of a consumption.

If the cough be violent, and the patient young and strong, with a hard quick pulse, bleeding will be proper; but in weak and relaxed habits, bleeding rather prolongs the disease. When the patient spits freely, bleeding is unnecessary, and sometimes hurtful, as it tends to lessen that discharge.

When the cough is not attended with any degree of fever, and the spittle is viscid and tough, sharp pectoral medicines are to be administered; as gum-ammoniac, squills, &c. Two table-spoonfuls of the solution of gum-ammoniac may be taken three or four times a-day, more or less, according to the age and constitution of the patient. Squills may be given various ways: two ounces of the vinegar, the oxymel, or the syrup, may be mixed with the same quantity of simple cinnamon-water, to which may be added an ounce of common water and an ounce of balsamic syrup. Two table-spoonfuls of this mixture may be taken three or four times a-day.

A syrup made of equal parts of lemon juice, honey, and sugar-

candy, is likewise very proper in this kind of cough. A table-spoonful of it may be taken at pleasure.

But when the defluxion is sharp and thin, these medicines rather do hurt. In this case gentle opiates, oils, and mucilages, are more proper. A cup of an infusion of wild poppy-leaves and marsh-mallow roots, or the flowers of colts-foot, may be taken frequently; or a tea-spoonful of the paregoric elixir may be put into the patient's drink twice a-day. Fuller's *Spanish infusion* (see the Appendix) is also a very proper medicine in this case, and may be taken in the quantity of a tea-cupful three or four times a-day.

When a cough is occasioned by acrid humours tickling the throat and *fauces*, the patient should keep some soft pectoral lozenges almost constantly in his mouth, as the Pontefract liquorice cakes, barley-sugar, the common balsamic lozenges, Spanish juice, &c. These blunt the acrimony of the humours, and, by taking off their stimulating quality, help to appease the cough.

In the fifth edition of this book I recommended for an obstinate tickling cough, an oily emulsion, made with the paregoric elixir, or *camphorated tincture of opium*, of the Edinburgh Dispensatory, instead of the common alkaline spirit. I have since been told by several practitioners, that they found it to be an excellent medicine in this disorder, and every way deserving of the character which I had given it. Where this elixir is not kept, its place may be supplied by adding to the common oily emulsion an adequate proportion of the *thebaic tincture*, or liquid laudanum.

In obstinate coughs, proceeding from a flux of humours upon the lungs, it will be often necessary, besides expectorating medicines, to have recourse to issues, setons, or some other drain. In this case I have often observed the most happy effects from a Burgundy-pitch plaster applied between the shoulders. I have ordered this simple remedy in the most obstinate coughs, in a great number of cases, and in many different constitutions, without ever knowing it fail to give relief, unless where there were evident signs of an ulcer in the lungs.

About the bulk of a nutmeg of Burgundy pitch may be spread thin upon a piece of soft leather, about the size of the hand, and laid between the shoulder blades. It may be taken off, and wiped every three or four days, and ought to be renewed once a fortnight or three weeks. This is indeed a cheap and simple medicine, and consequently apt to be despised; but we will venture to affirm, that the whole *materia medica* does not afford an application more efficacious in almost every kind of cough. It has not indeed always an immediate effect; but, if kept on for some time, it will succeed where most other medicines fail.

The only inconveniency attending this plaster is the itching which it occasions; but surely this may be dispensed with, considering the advantage which the patient may expect to reap from the application: besides, when the itching becomes very uneasy,

the plaster may be taken off, and the part rubbed with a dry cloth, or washed with a little warm milk and water. Some caution indeed is necessary in discontinuing the use of such a plaster; this however may safely be done by making it smaller by degrees, and at length quitting it altogether in a warm season.

Some complain that the pitch plaster adheres too fast, while others find difficulty in keeping it on. This proceeds from the different kinds of pitch made use of, and likewise from the manner of making it. I generally find it answer best when mixed with a little bees-wax, and spread as cool as possible. The clear, hard, transparent pitch answers the purpose best.

But coughs proceed from many other causes beside defluxions upon the lungs. In these cases the cure is not to be attempted by pectoral medicines. Thus, in a cough proceeding from a foulness and debility of the stomach, syrups, oils, mucilages, and all kinds of balsamic medicines do hurt. The *stomach cough* may be known from one that is owing to a fault in the lungs by this, that in the latter the patient coughs whenever he inspires, or draws in his breath fully; but in the former that does not happen.

The cure of this cough depends chiefly upon cleansing and strengthening the stomach; for which purpose gentle vomits and bitter purgatives are most proper. Thus, after a vomit or two, the sacred tincture, as it is called, may be taken for a considerable time in the dose of one or two table-spoonfuls twice a-day, or as often as it is found necessary, to keep the body gently open. People may make this tincture themselves, by infusing an ounce of *hiera picra*, i. e. the *aloetic powder with canella*, mentioned in the Appendix, in an English pint of white-wine, letting it stand a few days, and then straining it.

In coughs which proceed from a debility of the stomach, the Peruvian bark is likewise of considerable service. It may either be chewed, taken in powder, or made into a tincture, along with other stomachic bitters.

A nervous cough can only be removed by change of air and proper exercise; to which may be added the use of gentle opiates. Instead of the saponaceous pill, the paregoric elixir, &c. which are only opium disguised, ten, fifteen, twenty or twenty-five drops of liquid laudanum, more or less, as circumstances require, may be taken at bed-time, or when the cough is most troublesome. Immersing the feet and hands in warm water will often appease the violence of a nervous cough.

When a cough is only the symptom of some other malady, it is in vain to attempt to remove it without first curing the disease from which it proceeds. Thus, when a cough is occasioned by *teething*, keeping the body open, scarifying the gums, or whatever facilitates the cutting of the teeth, likewise appeases the cough. In like manner, when *worms* occasion a cough, such medicines as remove these vermin will generally cure the cough; as bitter purgatives, oily clysters, and such like.

Women, during the last months of pregnancy, are often greatly afflicted with a cough, which is generally relieved by bleeding, and keeping the body gently open. They ought to avoid all flatulent food, and to wear a loose easy dress.

A cough is not only a symptom, but is often likewise the forerunner, of diseases. Thus, the gout is frequently ushered in by a very troublesome cough, which affects the patient for some days before the coming on of the fit. This cough is generally removed by a paroxysm of the gout, which should therefore be promoted by keeping the extremities warm, drinking warm liquors, and bathing the feet and legs frequently in lukewarm water.

OF THE HOOPING-COUGH, OR CHIN-COUGH.

This cough seldom affects adults, but proves often fatal to children. Such children as live upon thin watery diet, who breathe unwholesome air, and have too little exercise, are most liable to this disease, and generally suffer most from it.

The chin-cough is so well known, even to nurses, that a description of it is unnecessary. Whatever hurts the digestion, obstructs the perspiration, or relaxes the solids, disposes to this disease; consequently its cure must depend upon cleansing and strengthening the stomach, bracing the solids, and at the same time promoting perspiration and the different secretions.

The diet must be light, and of easy digestion: for children, good bread made into pap or pudding, chicken broth, with other light spoon meats, are proper, but those who are farther advanced may be allowed sago-gruel, and, if the fever be not high, a little boiled chicken, or other white meats. The drink may be hyssop or penny-royal tea, sweetened with honey or sugar-candy, small wine-whey; or if the patient be weak, he may sometimes be allowed a little negus.

One of the most effectual remedies in the chin-cough is change of air. This often removes the malady, even when the change seems to be from a purer to a less wholesome air. This may in some measure depend on the patient's being removed from the place where the infection prevails. Most of the diseases of children are infectious; nor is it at all uncommon to find the chin-cough prevailing in one town or village, when another, at a very small distance is quite free from it. But whatever be the cause, we are sure of the fact. No time ought, therefore, to be lost in removing the patient at some distance from the place where he caught the disease, and, if possible, into a more pure and warm air. Patients have been known to reap benefit from a change of air at all periods of the disease. It is not sufficient to take the patient out daily in a carriage. This seldom answers any good purpose, but often does hurt, by giving him cold.

When the disease proves violent, and the patient is in danger of being suffocated by the cough, he ought to be bled, especially if there be a fever with a hard full pulse. But as the chief inten-

tion of bleeding is to prevent an inflammation of the lungs, and to render it more safe to give vomits, it will seldom be necessary to repeat the operation; yet if there are symptoms of an inflammation of the lungs, a second or even a third bleeding may be requisite.

It is generally reckoned a favourable symptom when a fit of coughing makes the patient vomit. This cleanses the stomach, and greatly relieves the cough. It will therefore be proper to promote this discharge either by small doses of ipecacuanha, or the vomiting julep recommended in the Appendix.

It is very difficult to make children drink after a vomit. I have often seen them happily deceived, by infusing a scruple or half a drachm of the powder of ipecacuanha in a tea pot, with half an English pint of boiling water. If this be disguised with a few drops of milk and a little sugar, they will imagine it tea, and drink it very greedily. A small tea-cupful of this may be given every quarter of an hour, or rather every ten minutes, till it operates. When the child begins to puke, there will be no occasion for drinking any more, as the water already on the stomach will be sufficient.

Vomits not only cleanse the stomach, which in this disease is generally loaded with the viscid phlegm, but they likewise promote the perspiration and other secretions, and ought therefore to be repeated according to the obstinacy of the disease. They should not however be strong: gentle vomits frequently repeated are both less dangerous and more beneficial than strong ones.

The body ought to be kept gently open. The best medicines for this purpose are rhubarb and its preparations, as the syrup, tincture, &c. Of these a tea-spoonful or two may be given to an infant twice or thrice a day, as there is occasion. To such as are farther advanced, the dose must be proportionally increased, and repeated till it has the desired effect. Those who cannot be brought to take the bitter tincture, may have an infusion of senna and prunes, sweetened with manna, coarse sugar, or honey; or a few grains of rhubarb mixed with a tea-spoonful or two of syrup, or currant jelly, so as to disguise the taste. Most children are fond of syrups and jellies, and seldom refuse even a disagreeable medicine when mixed with them.

Many people believe that oily, pectoral, and balsamic medicines possess wonderful virtues for the chin-cough, and accordingly exhibit them plentifully to patients of every age and constitution, without considering that every thing of this nature must load the stomach, hurt the digestion, and of course aggravate the disorder.

Dr. Duplanil says, he has seen many good effects from the kermes mineral in this complaint, the cough being frequently alleviated even by the first dose. The dose for a child of one year old is a quarter of a grain dissolved in a cup of any liquid, repeated

two or three times a-day. For a child of two years, the dose is half a grain; and the quantity must be thus increased in proportion to the age of the patient.

The *millepedes*, or wood-lice, are greatly recommended for the cure of the chin-cough. Those who choose to make use of these insects, may infuse two ounces of them bruised in an English pint of small white wine for one night. Afterwards the liquor may be strained through a cloth, and a table-spoonful of it given to the patient three or four times a day.

Opiates are sometimes necessary to allay the violence of the cough. For this purpose a little of the syrup of poppies, or five, six, or seven drops of laudanum, according to the age of the patient, may be taken in a cup of hyssop or penny-royal tea, and repeated occasionally.

Some recommend the extract of hemlock as an extraordinary remedy in the hooping cough; but so far as I have been able to observe, it is no way superior to opium, which, when properly administered, will often relieve some of the most troublesome symptoms of this disorder.

The garlic ointment is a well known remedy in North Britain for the chin-cough. It is made by beating in a mortar garlic with an equal quantity of hogs lard. With this the soles of the feet may be rubbed twice or thrice a-day; but the best method is to spread it upon a rag, and apply it in the form of plaster. It should be renewed every night and morning at least; as the garlic soon loses its virtue. This is an exceeding good medicine both in the chin-cough, and in most other coughs of an obstinate nature. For the latter it was recommended by an English writer upwards of one hundred and fifty years ago. It ought not however to be used when the patient is very hot or feverish, lest it should increase these symptoms.

The feet should be bathed once every two or three days in lukewarm water; and a Burgundy pitch-plaster kept constantly between the shoulders. But when the disease proves very violent, it will be necessary, instead of it, to apply a blistering-plaster, and to keep the part open for some time with issue-ointment.

When the disease is prolonged, and the patient is free from a fever, the Peruvian bark and other bitters, are the most proper medicines. The cinchona may either be taken in substance, or in a decoction or infusion, as is most agreeable. For a child, ten, fifteen, or twenty grains, according to the age of the patient, may be given three or four times a day. For an adult, half a drachm or two scruples will be proper. Some give the extract of the bark (cinchona) with cantharides, but to manage this requires a considerable attention. It is more safe to give a few grains of castor along with the bark. A child of six or seven years of age may take seven or eight grains of castor, with fifteen grains of powdered bark, for a dose. This may be made into a mixture with two or three ounces of any simple distilled water, and a little syrup, and taken three or four times a day.

The hooping-cough being evidently a spasmodic disease, it is probable that tonic medicines will be found the most proper to complete its cure.

As it is now very common to employ embrocations for the relief of patients labouring under this disease, we subjoin the following formula, which is probably equally as useful as any of those that have hitherto been offered to the public. Take an equal quantity of old rum and spirit of turpentine, and mix well; rub the spine or back bone from top to bottom, a quarter of an hour or twenty minutes, before the fire. It is asserted that if an emetic is occasionally given to loosen the phlegm, the hooping will soon be entirely eradicated. We must, however, recommend the occasional exhibition of a cathartic, suited to the age and strength of the patient, to cleanse the intestines.

CHAP. XXX.

INFLAMMATION OF THE STOMACH AND OTHER VISCERA.

ALL inflammations of the bowels are dangerous, and require the most speedy assistance; as they frequently end in a suppuration, and sometimes in a mortification, which is certain death.

CAUSES.——An inflammation of the stomach may proceed from any of the causes which produce an inflammatory fever; as cold liquor drank while the body is warm, obstructed perspiration, or the sudden striking in of any eruption. It may likewise proceed from the acrimony of the bile; or from acrid and stimulating substances taken into the stomach; as strong vomits or purges, corrosive poisons, suddenly passing from a cold atmosphere into a warm room, and such like. When the gout has been repelled from the extremities, either by cold or improper applications, it often occasions an inflammation of the stomach. Hard or indigestible substances taken into the stomach, as bones, the stones of fruits, &c. may likewise have that effect.

SYMPTOMS.——It is attended with a fixed pain and burning heat in the stomach; great restlessness and anxiety; a small, quick, and hard pulse; vomiting, or at least a nausea and sickness; excessive thirst; coldness of the extremities; difficulty of breathing; cold clammy sweats; and sometimes convulsions and fainting fits. The stomach is swelled, and often feels hard to the touch. One of the most certain signs of this disease is the sense of pain which the patient feels upon taking any kind of food or drink, especially if it be either too hot or too cold.

When the patient vomits every thing he eats or drinks, is extremely restless, has a hiccup, with an intermitting pulse, and frequent fainting fits, delirium, or convulsions, the danger is very great.

REGIMEN.——All acrimonious, heating, and irritating food and drink are carefully to be avoided. The weakness of the patient may deceive the by-standers, and induce them to give him wines, spirits, or other cordials; but these never fail to increase the disease, and often occasion sudden death. The inclination to vomit may likewise impose on the attendants, and make them think a vomit necessary; but that too is almost certain death.

The food must be light, thin, cool, and easy of digestion. It must be given in small quantities, and should neither be quite cold nor too hot. Thin gruel made of barley or oatmeal, light toasted bread dissolved in boiling water, or very weak chicken broth, are the most proper. The drink should be clear whey, barley-water, water in which toasted bread has been boiled, or decoctions of emollient vegetables, as liquorice and marsh-mallow roots, sarsaparilla, or the like.

MEDICINE.——Bleeding in this disease is absolutely necessary, and is almost the only thing that can be depended on. When the disease proves obstinate, it will often be proper to repeat this operation several times, nor must the low state of the pulse deter us from doing so. The pulse indeed generally rises upon bleeding, and as long as that is the case, the operation is safe.

Frequent fomentations with lukewarm water, or a decoction of emollient vegetables, are likewise beneficial. Flannel cloths dipped in these must be applied to the region of the stomach, and removed as they grow cool. They must neither be applied too warm, nor be suffered to continue till they become quite cold, as either of these extremes would aggravate the disease.

The feet and legs ought likewise to be frequently bathed in lukewarm water, and warm bricks or poultices may be applied to the soles of the feet. The warm bath, if it can be conveniently used, will be of great service.

In this, and all other inflammations of the bowels, an epispastic, or blistering-plaster, applied over the part affected, is one of the best remedies I know. I have often used it, and do not recollect one instance wherein it did not give relief to the patient.

The only internal medicines which we shall venture to recommend in this disease, are mild clysters. These may be made of warm water, or thin water-gruel; and if the patient is costive, a little sweet oil, honey, or manna, may be added. Clysters answer the purpose of an internal fomentation, while they keep the body open, and at the same time nourish the patient, who is often in this disease unable to retain any food upon his stomach. For these reasons they must not be neglected, as the patient's life may depend on them. When the disease is to all appearance entirely removed, the greatest care will be necessary for a considerable time, afterwards, lest a relapse should be induced.

INFLAMMATION OF THE INTESTINES.

THIS is one of the most painful and dangerous diseases that mankind is liable too. It generally proceeds from the same *causes*

as the inflammation of the stomach; to which may be added costiveness, worms, eating unripe fruit or great quantities of nuts, drinking hard windy malt liquors, as stale bottled beer or ale, sour wine, cyder, &c. It may likewise be occasioned by a rupture, by schirrous tumors of the intestines, or by their opposite sides growing together.

The inflammation of the intestines is denominated *Iliac passion Enteritis*, &c. according to the name of the parts affected. The treatment however is nearly the same, whatever part of the intestinal canal be the seat of the disease; we shall therefore omit these distinctions, lest they should perplex the reader.

The *symptoms* here are nearly the same as in the foregoing disease; only the pain if possible is more acute, and is situated lower. The vomiting is likewise more violent, and sometimes even the excrements, together with the clysters, are discharged by the mouth. The patient is continually belching up wind, and has often an obstruction of his urine, tension of the belly, and obstinate costiveness.

While the pain shifts, and the vomiting only returns at certain intervals, and while the clysters pass downwards, there is ground for hope; but when the clysters and *fæces* are vomited, and the patient is exceeding weak, with a low fluttering pulse, a pale countenance, and a disagreeable or stinking breath, there is great reason to fear that the consequences will prove fatal. Clammy sweats, black fœtid stools, with a small intermitting pulse, and a total cessation of pain, are signs of a mortification already begun, and of approaching death.

REGIMEN.——The regimen in this disease is in general the same as in an inflammation of the stomach. The patient must be kept quiet, avoiding cold, and all violent passions of the mind. His food ought to be very light, and given in small quantities; his drink weak and diluting; as clear whey, barley-water, and such like.

MEDICINE.——Bleeding in this, as well as in the inflammation of the stomach, is of the greatest importance. It should be performed as soon as the symptoms appear, and must be repeated according to the strength of the patient, and the violence of the disease.

A blistering-plaster is here likewise to be applied immediately over the part where the most violent pain is. This not only relieves the pain of the bowels, but even clysters and purgative medicines, which before had no effect, will operate when the blister begins to rise.

Fomentations and laxative clysters are by no means to be omitted. The patient's feet and legs should frequently be bathed in warm water, and cloths dipt in it applied to his belly. Bladders filled with warm water may likewise be applied to the region of the navel, and warm bricks, or bottles filled with warm water, to the soles of the feet. The clysters may be made of barley-water, or thin gruel with salt, and softened with sweet oil or fresh butter.

These may be administered every two or three hours, or oftener, if the patient continues costive.

If the disease does not yield to clysters and fomentations, recourse must be had to pretty strong purgatives: but as these, by irritating the bowels, often increase their contraction, and by that means frustrate their own intention, it will be necessary to join them with opiates, which, by allaying the pain, and relaxing the spasmodic contractions of the guts, greatly assist the operation of purgatives in this case.

What answers the purpose of opening the body very well is a solution of *vitriolated magnesia* (the bitter purging salts.) Two ounces of these may be dissolved in an English pint of warm water, or thin gruel, and a tea-cupful of it taken every half hour till it operates. At the same time fifteen, twenty, or twenty-five drops of laudanum may be given in a glass of peppermint or simple cinnamon-water, to appease the irritation, and prevent the vomiting and convulsive motions of the intestines.

Acids have often a very happy effect in staying the vomiting and appeasing the other violent symptoms of this disease. It will therefore be of use to sharpen the patient's drink with cream of tartar, juice of lemon, or, when these cannot be obtained, with vinegar.

But it often happens that no liquor whatever will stay on the stomach. In this case the patient must take purging pills. I have generally found the following answer very well: Take jalap in powder and *vitriolated kali*, of each half a drachm, opium one grain, Castile soap as much as will make the mass fit for pills. These must be taken at one dose, and if they do not operate in a few hours, the dose may be repeated.

If a stool cannot be procured by any of the above means, it will be necessary to immerse the patient in warm water up to the breast. I have often seen this succeed when other means had been tried in vain. The patient must continue in the water as long as he can easily bear it without fainting, and if one immersion has not the desired effect, it may be repeated as soon as the patient's strength and spirits are recruited. It is more safe for him to go frequently into the bath, than to continue too long at a time; and it is often necessary to repeat it several times before it has the desired effect.

It has sometimes happened, after all other means of procuring a stool had been tried to no purpose, that this was brought about by immersing the patient's lower extremities in cold water, or making him walk upon a wet pavement, and dashing his legs and thighs with the cold water. This method, when others fail, at least merits a trial. It is indeed attended with some danger, but a doubtful remedy is better than none.

In desperate cases it is common to give quicksilver. This may be given to the quantity of several ounces, or even a pound; but should not exceed that. But when quicksilver is given in too large quantities, it defeats its own intention, as it drags down the

bottom of the stomach, which prevents it getting over the pylorus. In this case the patient should be hung up by the heels, in order that the quicksilver may be discharged by his mouth. When there is reason to suspect a mortification of the guts, this medicine ought not to be tried. In that case it cannot cure the patient, and will only hasten his death. But when the obstruction is occasioned by any other cause that can be removed by force, quicksilver is not only a proper medicine, but the best that can be administered, as it is the fittest body we know for making its way through the intestinal canal.

If the disease proceeds from a rupture, the patient must be laid with his head very low, and the intestines returned by gentle pressure with the hand. If this, with fomentations and clysters, should not succeed, recourse must be had to a surgical operation, which may give the patient relief.

Such as would avoid this excruciating and dangerous disease, must take care never to be too long without a stool. Some who have died of it have had several pounds of hard dry *fæces* taken out of their guts. They should likewise beware of eating too freely of sour or unripe fruits, or drinking stale windy liquors, &c. I have known it brought on by living too much on baked fruits, which are seldom good. It likewise proceeds frequently from cold caught by wet clothes, &c. but especially from wet feet.

There is great danger in mistaking inflammation of the bowels for colicky pains, which may occasion the most dangerous error in the treatment of this disease, for here aromatic, spirituous, and heating liquors, must necessarily accelerate the termination of this disease in mortification.

OF THE COLIC.

The colic has a great resemblance to the two preceding diseases, both in its symptoms and method of cure. It is generally attended with costiveness and acute pain of the bowels; and requires diluting diet, evacuations, fomentations, &c.

Colics are variously denominated according to their cause, as the *flatulent*, the *bilious*, the *hysteric*, the *nervous*, &c. As each of these requires a particular method of treatment, we shall point out their most general symptoms, and the means to be used for their relief.

The *flatulent* or wind-colic is generally occasioned by an indiscreet use of unripe fruits, meats of hard digestion, windy vegetables, fermenting liquors, and such like. It may likewise proceed from an obstructed perspiration, or catching cold. Delicate people, whose digestive powers are weak, are most liable to this kind of colic.

The flatulent colic may either affect the stomach or intestines. It is attended with a painful stretching of the affected part. The patient feels a rumbling in his guts, and is generally relieved by a discharge of wind, either upwards or downwards. The pain is sel-

dom confined to any particular part, as the vapour wanders from one division of the bowels to another till it finds a vent.

When the disease proceeds from windy liquor, green fruit, sour herbs, or the like, the best medicine on the first appearance of the symptoms is a dram of brandy, gin, or any good spirits. The patient should likewise sit with his feet upon a warm hearth-stone, or apply warm bricks to them; and warm clothes may be applied to his stomach and bowels.

This is the only colic wherein ardent spirits, spiceries, or any thing of a hot nature, may be ventured upon. Nor indeed are they to be used here unless at the very beginning, before any symptoms of inflammation appear. We have reason to believe, that a colic occasioned by wind or flatulent food might always be cured by spirits and warm liquors, if they were taken immediately upon perceiving the first uneasiness; but when the pain has continued for a considerable time, and there is reason to fear an inflammation of the bowels is already begun, all hot things are to be avoided as poison, and the patient is to be treated in the same manner as for the inflammation of the intestines.

Several kinds of food, as honey, eggs, &c. occasion colics in some particular constitutions. I have generally found the best method of cure for these was to drink plentifully of small diluting liquors, as water-gruel, small posset, water with toasted bread soaked in it, &c.

Colics which proceed from excess and indigestion generally cure themselves by occasioning vomiting and purging. The discharges are by no means to be stopped, but promoted by drinking plentifully of warm water, or weak posset. When their violence is over, the patient may take a dose of rhubarb, or any other gentle purge, to carry off the dregs of his debauch.

Colics which are occasioned by wet feet, or catching cold, may generally be removed at the beginning, by bathing the feet and legs in warm water, and drinking such warm diluting liquors as will promote the perspiration, as weak wine-whey, or water-gruel with a small quantity of spirits in it.

Those flatulent colics, which prevail so much among country people, might generally be prevented, were they careful to change their clothes when they get wet. They ought likewise to take a dram, or to drink some warm liquor after eating any kind of green trash. We do not mean to recommend the practice of dram-drinking, but in this case ardent spirits prove a real medicine, and indeed the best that can be administered. A glass of good peppermint-water will have nearly the same effect as a glass of brandy, and in some cases is rather to be preferred.

The *bilious* colic is attended with very acute pains about the region of the navel. The patient complains of great thirst, and is generally costive. He vomits a hot, bitter, yellow coloured bile, which being discharged, seems to afford some relief, but is quickly followed by the same violent pain as before. As the distemper advances, the propensity to vomit sometimes increases so as to be-

come almost continual, and the proper motion of the intestines is so far perverted, that there are all the symptoms of an impending iliac passion.

If the patient be young and strong, and the pulse full and frequent, it will be proper to bleed, after which clysters may be administered. Clear whey or gruel, sharpened with the juice of lemon or cream of tartar, must be drank freely. Small chicken broth, with a little manna dissolved in it, or a slight decoction of tamarinds, are likewise very proper, or any other thin, acid, opening liquor.

Besides bleeding and plentiful dilution, it will be necessary to foment the belly with cloths dipped in warm water; and if this should not succeed, the patient must be immersed up to the breast in warm water.

In the bilious colic, the vomiting is often very difficult to restrain. When this happens, the patient may drink a decoction of toasted bread, or an infusion of garden-mint in boiling water. Should these not have the desired effect, the saline draught, with a few drops of laudanum in it, may be given, and repeated according to the urgency of the symptoms. A small quantity of Venice treacle may be spread in form of a cataplasm, and applied to the pit of the stomach. Clysters, with a proper quantity of Venice treacle or liquid laudanum in them, may likewise be frequently administered.

Such as are liable to frequent returns of the bilious colic should use flesh sparingly, and live chiefly upon a light vegetable diet. They should likewise take frequently a dose of cream of tartar with tamarinds, or any other cool acid purge.

The *hysteric* colic bears a great resemblance to the bilious. It is attended with acute pains about the region of the stomach, vomiting, &c. What the patient vomits in this case is commonly of a greenish colour. There is a great sinking of the spirits, with dejection of mind and difficulty of breathing, which are the characteristic symptoms of this disorder. Sometimes it is accompanied with the jaundice, but this generally goes off of its own accord in a few days.

In this colic all evacuations, as bleeding, purging, vomiting, &c. do hurt. Every thing that weakens the patient, or sinks the spirits, is to be avoided. If however the vomiting should prove violent, lukewarm water, or small posset, may be drank to cleanse the stomach. Afterwards the patient may take fifteen, twenty, or twenty-five drops of *tincture of opium* (liquid laudanum) in a glass of cinnamon water. This may be repeated every ten or twelve hours till the symptoms abate.

The patient may likewise take four or five of the fœtid pills every six hours, and drink a cup of pennyroyal tea after them. If asafœtida should prove disagreeable, which is sometimes the case, a teaspoonful of the tincture of castor in a cup of pennyroyal tea, or thirty or forty drops of the balsam of Peru dropped upon a bit of

loaf sugar, may be taken in its stead. The *anti hysteric plaster* may also be used, which has often a good effect.

The *nervous* colic prevails among miners, melters of lead, plumbers, the manufacturers of white lead, &c. It is very common in the cyder counties of England, and is supposed to be occasioned by the leaden vessels used in preparing that liquor. It is likewise a frequent disease in the West Indies, where it is termed the dry belly-ach.

No disease of the bowels is attended with more excruciating pain than this. Nor is it soon at an end. I have known it continue eight or ten days with very little intermission, the body all the while continuing bound in spite of medicine, yet at length yield, and the patient recover. It generally however leaves the patient weak, and often ends in a palsy.

As the smoak of tobacco thrown into the bowels will often procure a stool when all other means have failed, an apparatus for this purpose ought to be kept by every surgeon. It may be purchased at a small expence, and will be of service in several other cases, as the recovery of drowned persons, &c.

The general treatment of this disease is so nearly the same with that of the iliac passion, or inflammation of the guts, that we shall not insist upon it. The body is to be opened with mild purgatives given in small doses, and frequently repeated, and their operation must be assisted by soft oily clysters, fomentations, &c. The castor oil is reckoned peculiarly proper in this disease. It may both be mixed with the clysters and given by the mouth. The dose is from one table-spoonful to two or three, if necessary, to open the body.

The Barbadoes tar is said to be an efficacious medicine in this complaint. It may be taken to the quantity of two drachms three times a day, or oftener if the stomach will bear it. This tar, mixed with an equal quantity of strong rum, is likewise proper for rubbing the spine, in case any tingling, or other symptoms of the palsy, are felt. When the tar cannot be obtained, the back may be rubbed with strong spirits, or a little oil of nutmegs, or of rosemary.

If the patient remains weak and languid after this disease, he must take exercise on horseback, and use an infusion of the Peruvian bark in wine. When the disease ends in a palsy, the Bath waters are found to be extremely proper.

To avoid this kind of colic, people must shun all sour fruits, acids, austere liquors, &c. Those who work in lead ought never to go to their business fasting, and their food should be oily or fat. They may take a glass of salad oil, with a little brandy or rum, every morning, but should never take spirits alone. Liquid aliment is best for them, as fat broths, &c.; but low living is bad. They should frequently go a little out of the tainted air, and should never suffer themselves to be costive. In the West Indies, and on the coast of Guinea, it has been found of great use for prevent-

ing this colic, to wear a piece of flannel round the waist, and to drink an infusion of ginger by way of tea.

Sundry other kinds of this disease might be mentioned, but too many distinctions would tend only to perplex the reader. Those already mentioned are the most material, and should indeed be attended to, as their treatment is very different. But even persons who are not in a condition to distinguish very accurately in these matters, may nevertheless be of great service to patients in colics of every kind by only observing the following general rules, viz. To bathe the feet and legs in warm water; to apply bladders filled with warm water, or cloths wrung out of it, to the stomach and bowels; to make the patient drink freely of diluting mucilaginous liquors; and to give him an emollient clyster every two or three hours. Should these not succeed, the patient ought to be immersed in a warm bath.

INFLAMMATION OF THE KIDNEYS.

CAUSES.——This disease may proceed from any of those causes which produce an inflammatory fever. It may likewise be occasioned by wounds or bruises of the kidneys; small stones or gravel lodging within them; by strong diuretic medicines, as spirits of turpentine, tincture of cantharides, &c. Violent motion, as hard riding or walking, especially in hot weather, or whatever drives the blood too forcibly into the kidneys, may occasion this malady. It may likewise proceed from lying too soft, too much on the back, involuntary contractions, or spasms, in the urinary vessels, &c.

SYMPTOMS.——There is a sense of heat and a sharp pain about the region of the kidneys, with some degree of fever, and a stupor or dull pain in the thigh of the affected side. The urine is at first clear, and afterwards of a reddish colour; but in the worst kind of the disease it generally continues pale, is passed with difficulty, and commonly in small quantities at a time. The patient feels great uneasiness when he endeavours to walk or sit upright. He lies with most ease on the affected side, and has generally a nausea or vomiting, resembling that which happens in the colic. Delirium with pale urine, or an obstruction to its secretion, are fatal symptoms.

This disease however may be distinguished from the colic by the pain being seated farther back, and by the difficulty of passing urine, with which it is constantly attended. The piles frequently relieve the patient.

REGIMEN.——Every thing of a heating or stimulating nature is to be avoided. The food must be thin and light; as panado, small broths, and mild vegetables, and the like. Emollient and thin liquors must be plentifully drank; as clear whey, or balm-tea sweetened with honey, decoctions of marsh-mallow roots, with barley and liquorice, &c. The patient, notwithstanding the vomiting, must constantly keep sipping small quantities of these or

other diluting liquors. Nothing so safely and certainly abates the inflammation, and expels the obstructing cause, as copious dilution. The patient must be kept easy, quiet, and free from cold, as long as any symptoms of inflammation remain.

MEDICINE.——Bleeding is generally necessary, especially at the beginning. Ten or twelve ounces may be let from the arm or foot with a lancet, and if the pain and inflammation continue, the operation may be repeated in twenty-four hours, especially if the patient be of a full habit. Leeches may likewise be applied to the hæmorrhoidal veins, as a discharge from these will greatly relieve the patient.

Cloths dipped in warm water, or bladders filled with it, must be applied as near as possible to the part affected, and renewed as they grow cool. If the bladders be filled with a decoction of mallows and camomile flowers, to which a little saffron is added, and mixed with about a third part of new milk, it will be still more beneficial. The patient should be supplied freely with demulcent drinks, as barley water, with the addition of gum arabic.

Emollient clysters ought frequently to be administered; and if these do not open the body, a little salt and honey or manna may be added to them.

The same course is to be followed where gravel or stone is lodged in the kidney; but when gravel or stone is separated from the kidney, and lodges in the ureter, it will be proper, besides the fomentations, to rub the small of the back with sweet oil, and to give gentle diuretics; as juniper-water and linseed tea, sweetened with the syrup of marsh-mallows; a tea-spoonful of the *spirit of nitrous ether* (sweet spirits of nitre), with a few drops of laudanum, may now and then be put in a cup of the patient's drink. He ought likewise to take exercise on horseback, or in a carriage, if he be able to bear it.

The ureters are two long and small canals, one on each side, which carry the urine from the basin of the kidneys to the bladder. They are sometimes obstructed by small pieces of gravel falling down from the kidneys, and lodging in them.

When the disease is protracted beyond the seventh or eighth day, and the patient complains of a stupor and heaviness of the part, has frequent returns of chilness, shivering, &c. there is reason to suspect that matter is forming in the kidney, and that an abscess will ensue, for the kidney is subject to inflammation and gangrene.

When matter in the urine shews that an ulcer is already formed in the kidney, the patient must be careful to abstain from all acrid, sour, and salted provisions; and to live chiefly upon mild mucilaginous herbs and fruits, together with the broth of young animals, made with barley, and common pot herbs, &c. His drink may be whey, and butter-milk that is not sour. The latter is by some reckoned a specific remedy in ulcers of the kidneys. To answer this character, however, it must be drank for a considerable time. Chalybeate waters have likewise been

found beneficial in this disease. This medicine is easily obtained, as it is found in every part of Great Britain. It must likewise be used for a considerable time, in order to produce any salutary effects.

Those who are liable to frequent returns of inflammation, or obstructions of the kidneys, must abstain from wines, especially such as abound with tartar; and their food ought to be light and of easy digestion. They should use moderate exercise, chiefly in the open air, and should not lie too hot, nor too much on their back.

INFLAMMATION OF THE BLADDER.

THE inflammation of the bladder proceeds, in a great measure, from the same causes as that of the kidneys. It is known by an acute pain towards the bottom of the belly, and difficulty of passing the urine, with some degree of fever, a constant inclination to go to stool, and a perpetual desire to make water.

This disease is accompanied with fever in proportion to the degree of violence in which it exists, and must be treated on the same principles as the one immediately preceding. The diet must be light and thin, and the drink of a cooling nature. Bleeding is very proper at the beginning, and in robust constitutions it will often be necessary to repeat it. The lower part of the belly should be fomented with warm water, or a decoction of mild vegetables; and emollient clysters, formed with a decoction of camomile-flowers and poppy-heads, ought frequently to be administered.

The patient should abstain from every thing that is of a hot, acrid, and stimulating quality, and should live entirely upon small broths, gruels, or mild vegetables.

A stoppage of urine may proceed from other causes besides an inflammation of the bladder; as a swelling of the hæmorrhoidal veins; hard *fæces* lodged in the *rectum*; a stone in the bladder; excrescences in the urinary passages; a palsy of the bladder; hysteric affections, &c. Each of these requires a particular treatment, which does not fall under our present consideration. We shall only observe, that in all of them mild and gentle applications are the safest, as strong diuretic medicines, or things of an irritating nature, generally increase the danger. I have known some persons kill themselves by introducing probes into the urinary passes, to remove, as they thought, somewhat that obstructed the discharge of urine; and others bring on a violent inflammation of the bladder, by using strong diuretics, as oil of turpentine, &c. for that purpose.

INFLAMMATION OF THE LIVER.

THE liver is less subject to inflammation than most of the other viscera, as in it the circulation is slower; but when an inflammation does happen, it is with difficulty removed, and often ends in a suppuration or schirrus.

CAUSES.——Besides the common causes of inflammation, we may here reckon the following, viz. excessive fatness, a schirrus of the liver itself, violent shocks from strong vomits when the liver was before unsound, an adust or atrabiliarian state of the blood, any thing that suddenly cools the liver after it has been greatly heated, stones obstructing the course of the bile, drinking strong wines and spirituous liquors, using hot spicy aliment, obstinate hypochondriacal affections, &c.

SYMPTOMS.——This disease is known by a painful tension of the right side under the false ribs, attended with some degree of fever, a sense of weight, or fulness of the part, difficulty of breathing, loathing of food, great thirst, with a pale or yellowish colour of the skin and eyes.

The *symptoms* here are various, according to the degree of inflammation, and likewise according to the particular part of the liver where the inflammation happens. Sometimes the pain is so inconsiderable, that an inflammation is not so much as suspected; but when it happens in the upper or convex part of the liver, the pain is more acute, the pulse quicker, and the patient is often troubled with a dry cough, a hiccup, and a pain extending to the shoulder, with difficulty of lying on the left side, and difficulty of breathing.

This disease may be distinguished from the pleurisy by the pain being less violent, seated under the false ribs, the pulse not so hard, and by the difficulty of lying on the left side. It may be distinguished from the hysteric and hypochondriac disorders by the degree of fever with which it is always attended.

This disease, if properly treated, is seldom mortal. A constant hiccuping, violent fever and excessive thirst are bad symptoms. If it ends in a suppuration, and the matter cannot be discharged outwardly, the danger is great. When the schirrus of the liver ensues, the patient, if he observes a proper regimen, may nevertheless live a number of years tolerably easy; but if he indulge in animal food and strong liquors, or take medicines of an acrid or irritating nature, the schirrus will be converted into a cancer, which must infallibly prove fatal.

REGIMEN.——The same regimen is to be observed in this as in other inflammatory disorders. All hot things are to be carefully avoided, and cool diluting liquors, as whey, barley-water, &c. drank freely. The food must be light and thin, and the body, as well as the mind, kept easy and quiet.

MEDICINE.——Bleeding is proper at the beginning of this disease, and it will often be necessary, even though the pulse should not feel hard, to repeat it. All violent purgatives are to be avoided; the body, however, must be kept gently open. A decoction of tamarinds, with a little honey or manna, will answer this purpose very well. The side affected must be fomented in the manner directed in the foregoing disease. Mild laxative clysters should be frequently administered; and if the pain should notwithstanding continue violent, a blistering plaster may be applied over

the part affected; or rather a plaster made of gum ammoniacum and vinegar of squills.

Medicines which promote the secretion of urine have a very good effect here. For this purpose half a drachm of purified nitre, or a tea-spoonful of the *spirit of nitrous ether*, may be taken in a cup of the patient's drink three or four times a day.

When there is an inclination to sweat, it ought to be promoted, but not with warm sudorifics. The only thing to be used for that purpose is plenty of diluting liquors drank about the warmth of the human blood. Indeed, the patient in this case, as well as in all other topical inflammations, ought to drink nothing that is colder than the blood.

If the stools should be loose, and even streaked with blood, no means must be used to stop them, unless they be so frequent as to weaken the patient. Loose stools often prove critical, and carry off the disease.

If an abscess or imposthume is formed in the liver, all methods should be tried to make it break and discharge itself outwardly, as fomentations, the application of poultices, ripening cataplasms, &c. Sometimes indeed the matter of an abscess comes away in the urine, and sometimes it is discharged by stool, but these are efforts of Nature which no means can promote. When the abscess bursts into the cavity of the *abdomen* at large, death must ensue; nor will the event be more favourable when the abscess is opened by an incision, unless in cases where the liver adheres to the *peritonæum*, so as to form a bag for the matter, and prevent it from falling into the cavity of the *abdomen*; in which case opening the abscess by a sufficiently large incision will probably save the patient's life.

If the disorder, in spite of all endeavours to the contrary, should end in a schirrus, the patient must be careful to regulate his diet &c. in such a manner as not to aggravate the disease. He must not indulge in flesh, fish, strong liquors, or any highly seasoned or salted provisions; but should, for the most part, live on mild vegetables, as fruits and roots, taking gentle exercise, and drinking whey, barley-water or butter-milk. If he takes any thing stronger, it should be fine mild ale, which is less heating than wines or spirits.

We shall take no notice of inflammations of the other viscera. They must in general be treated upon the same principles as those already mentioned. The chief rule with respect to all of them is, to let blood, to avoid every thing that is strong or of a heating nature, to apply warm fomentations to the part affected, and to cause the patient to drink a sufficient quantity of warm diluting liquors.

When the situation and circumstances of the patient will admit, we recommend, in all cases of inflammation of the abdominal viscera, an early application to those who are best qualified to administer relief.

CHAP. XXXI.

OF THE CHOLERA MORBUS, AND OTHER EXCESSIVE DISCHARGES FROM THE STOMACH AND BOWELS.

THE *cholera morbus* is a violent purging and vomiting, attended with gripes, sickness, and a constant desire to go to stool. It comes on suddenly, and is most common in autumn. There is hardly any disease that kills more quickly than this, when proper means are not used in due time for removing it.

CAUSES.——It is occasioned by a redundancy and putrid acrimony of the bile; cold; food that easily turns rancid or sour on the stomach; as butter, rancid bacon, sweet-meats, cucumbers, melons, cherries, and other cold fruits. It is sometimes the effect of strong acrid purges or vomits, or of poisonous substances taken into the stomach. It may likewise proceed from violent passions or affections of the mind; as fear, anger, &c.

SYMPTOMS.——It is generally preceded by a *cardialgia*, or heart-burn, sour belchings, and flatulencies, with pain of the stomach and intestines. To these succeed excessive vomiting and purging of green, yellow, or blackish-coloured bile, with a distention of the stomach, and violent griping pains. There is likewise a great thirst with a very quick unequal pulse, and often a fixed acute pain about the region of the navel. As the disease advances, the pulse often sinks so low as to become quite imperceptible, the extremities grow cold or cramped, and are often covered with a clammy sweat, the urine is obstructed, and there is a palpitation of the heart. Violent hiccuping, fainting, and convulsions, are the signs of approaching death.

MEDICINE.——At the beginning of this disease, the efforts of Nature to expel the offending cause should be assisted, by promoting the purging and vomiting. For this purpose the patient must drink freely of diluting liquors; as whey, butter-milk, warm water, thin water-gruel, small posset, or, what is perhaps preferable to any of them, very weak chicken broth. This should not only be drank plentifully to promote the vomiting, but a clyster of it given every hour in order to promote the purging.

After these evacuations have been continued for some time, a decoction of toasted oat-bread may be drank to stop the vomiting. The bread should be toasted till it is of a brown colour, and afterwards boiled in spring-water. If oat-bread cannot be had, wheat-bread, or oat-meal well toasted, may be used in its stead. If this does not put a stop to the vomiting, two table-spoonfuls of the saline julep, with ten drops of laudanum, may be taken every hour till it ceases.

The vomiting and purging, however, ought never to be stopped too soon. As long as these discharges do not weaken the patient,

they are salutary, and may be allowed to go on, or rather ought to be promoted. But when the patient is weakened by the evacuations, which may be known from the sinking of his pulse, &c. recourse must immediately be had to opiates, as recommended above; to which may be added strong wines, with spirituous cinnamon waters, and other generous cordials. Warm negus or strong wine-whey will likewise be necessary to support the patient's spirits, and promote the perspiration. His legs should be bathed in warm water, and afterwards rubbed with flannel cloths, or wrapped in warm blankets, and warm bricks applied to the soles of his feet. Flannels wrung out of warm spirituous fomentations should likewise be applied to the region of the stomach.

When the violence of the disease is over, to prevent a relapse, it will be necessary for some time to continue the use of small doses of laudanum. Ten or twelve drops may be taken in a glass of wine, at least twice a-day, for eight or ten days. The patient's food ought to be nourishing, but taken in small quantities, and he should use moderate exercise. As the stomach and intestines are generally much weakened, an infusion of the bark or other bitters, in small wine, sharpened with the elixir of vitriol, may be drank for some time.

Though physicians are seldom called in due time in this disease, they ought not to despair of relieving the patient even in the most desperate circumstances. Of this I lately saw a very striking proof in an old man and his son, who had both been seized with it about the middle of the night. I did not see them till next morning, when they had much more the appearance of dead than of living men. No pulse could be felt; the extremities were cold and rigid, the countenance was ghastly, and the strength almost quite exhausted. Yet from this deplorable condition they were both recovered by the use of opiates and cordial medicines.

OF A DIARRHŒA, OR LOOSENESS.

A LOOSENESS, in many cases, is not to be considered as a disease, but rather as a salutary evacuation. It ought therefore never to be stopped, unless when it continues too long, or evidently weakens the patient. As this however sometimes happens, we shall point out the most common causes of a looseness, with the proper method of treatment.

When a looseness is occasioned by catching cold, or an obstructed perspiration, the patient ought to keep warm, to drink freely of weak diluting liquors, to bathe his feet and legs frequently in lukewarm water, to wear flannel next his skin, and to take every other method to restore the perspiration.

In a looseness which proceeds from excess or repletion, a vomit is the proper medicine. Vomits not only cleanse the stomach, but promote all the secretions, which renders them of great importance in carrying off a debauch. Half a drachm of ipecacuanha in powder will answer this purpose very well. A day or two after the vomit, the same quantity of rhubarb may be taken, and repeated two or three times, if the looseness continues. The patient ought to live upon light vegetable food of easy digestion, and to drink whey, thin gruel, or barley-water.

A looseness occasioned by the obstruction of any customary evacuation generally requires bleeding. If that does not succeed, other

evacuations may be substituted in the room of those which are obstructed. At the same time every method is to be taken to restore the usual discharges, as not only the cure of the disease, but the patient's life may depend on this.

A periodical looseness ought never to be stopped. It is always an effort of Nature to carry off some offending matter, which, if retained in the body, might have fatal effects. Children are very liable to this kind of looseness, especially while teething. It is however so far from being hurtful to them, that such children generally get their teeth with less trouble. If these loose stools should at any time prove sour or griping, a tea-spoonful of magnesia alba, with four or five grains of rhubarb, may be given to the child in a little panado, or any other food. This, if repeated three or four times, will generally correct the acidity, and carry off the griping stools.

A diarrhœa, or looseness, which proceeds from violent passions or affections of the mind, must be treated with the greatest caution. Vomits in this case are highly improper. Nor are purges safe, unless they be very mild, and given in small quantities. Opiates and other antispasmodic medicines are most proper. Ten or twelve drops of liquid laudanum may be taken in a cup of valerian or penny-royal tea every eight or ten hours, till the symptoms abate. Ease, cheerfulness, and tranquillity of mind, are here of the greatest importance.

When looseness proceeds from acrid or poisonous substances taken into the stomach, the patient must drink large quantities of diluting liquors, with oil or fat broths, to promote vomiting and purging. Afterwards, if there be reason to suspect that the bowels are inflamed, bleeding will be necessary. Small doses of laudanum may likewise be taken to remove their irritation.

When the gout, repelled from the extremities, occasions a looseness, it ought to be promoted by gentle doses of rhubarb, or other mild purgatives. The gouty matter is likewise to be solicited towards the xtremities by warm fomentations, cataplasms, &c. The perspiration ught at the same time to be promoted by warm diluting liquors; as wine-whey, with VOLATILE LIQUOR OF HARTSHORN: a few drops of liquid laudanum may be added to it to allay irritation.

When a looseness proceeds from worms, which may be known from the sliminess of the stools, mixed with pieces of decayed worms, &c. medicines must be given to kill and carry off these vermin, as the powder of tin with purges of rhubarb and calomel. Afterwards lime-water, alone, or with a small quantity of rhubarb infused, will be proper to strengthen the bowels, and prevent the new generation of worms.

A looseness is often occasioned by drinking bad water. When this is the case, the disease is generally epidemical. When there is reason to believe that this or any other disease proceeds from the use of unwholesome water, it ought immediately to be changed, or, if that cannot be done, it may be corrected by mixing with it quick-lime, chalk, or the like.

In people whose stomachs are weak, violent exercise immediately after eating will occasion a looseness. Though the cure of this is obvious, yet it will be proper, besides avoiding violent exercise, to use such medicines as tend to brace and strengthen the stomach, as infusions of the bark, with other bitter and astringent ingredients, in white-wine. Such persons ought likewise to take frequently a glass or two of old red port, or good claret.

From whatever cause a looseness proceeds, when it is found necessary to check it, the diet ought to consist of rice boiled with milk, and flavoured with cinnamon; rice-jelly, sago with red port; and the lighter sorts of flesh-meat roasted. The drink may be thin water-gruel, rice-water, or weak broth made from lean veal, or with a sheep's head, as being more gelatinous than mutton, beef, or chicken-broth.

Persons who, from a peculiar weakness, or too great an irritability of the bowels, are liable to frequent returns of this disease, should live temperately, avoiding crude summer fruits, all unwholesome foods, and meats of hard digestion. They ought likewise to beware of cold moisture, or whatever may obstruct the perspiration, and should wear flannel next the skin. All violent passions, as fear, anger, &c. are likewise carefully to be guarded against.

OF VOMITING.

VOMITING may proceed from various causes; as excess in eating and drinking; foulness of the stomach; the acrimony of the aliments; a translation of the morbific matter of ulcers, of the gout, the erysipelas, or other diseases, to the stomach. It may likewise proceed from a looseness having been too suddenly stopped; from the stoppage of any customary evacuation, as the bleeding piles, the menses, &c.; from a weakness of the stomach, the colic, the iliac passion, a rupture, a fit of the gravel, worms; or from any kind of poison taken into the stomach. It is an usual symptom of injuries done to the brain; as contusions, compressions, &c. It is likewise a symptom of wounds or inflammations of the diaphragm, intestines, spleen, liver, kidneys, &c.

Vomiting may be occasioned by unusual motions, as sailing, being drawn backwards in a carriage, &c. It may likewise be excited by violent passions, or by the idea of nauseous or disagreeable objects, especially of such things as have formerly produced vomiting. Sometimes it proceeds from a regurgitation of the bile into the stomach: in this case what the patient vomits is generally of a yellow or greenish colour, and has a bitter taste. Persons who are subject to nervous affections are often suddenly seized with violent fits of vomiting. Lastly, vomiting is a common symptom, of pregnancy. In this case it generally comes on about two weeks after the stoppage of the menses, and continues during the first three or four months.

When vomiting proceeds from a foul stomach or indigestion, it is not to be considered as a disease, but as the cure of a disease. It ought therefore to be promoted by drinking lukewarm water, or thin gruel. If this does not put a stop to the vomiting, a dose of ipecacuanha may be taken, and worked off with weak camomile-tea.

When the retrocession of the gout, or the obstruction of customary evacuations, occasions vomiting, all means must be used to restore these discharges; or, if that cannot be effected, their place must be supplied by others, as bleeding, purging, bathing the extremities in warm water, opening issues, setons, perpetual blisters, &c.

When vomiting is the effect of pregnancy, it may generally be mitigated by bleeding and keeping the body gently open. The bleeding however ought to be in small quantities at a time, and the purgatives should be of the mildest kind, as figs, stewed prunes, manna, or sena. Pregnant women are most apt to vomit in the morning, immediately

after getting out of bed, which is owing partly to the change of posture, but more to the emptiness of the stomach. It may generally be prevented by taking a dish of coffee, tea, or some light breakfast, in bed. Pregnant women who are afflicted with vomiting ought to be kept easy both in body and mind. They should neither allow their stomachs to be quite empty, nor should they eat much at once. Cold water is a very proper drink in this case; if the stomach be weak, a little brandy may be added to it. If the spirits are low, and the person apt to faint, a spoonful of cinnamon-water, with a little marmalade of quinces or oranges, may be taken.

If vomiting proceeds from weakness of the stomach, bitters will be of service. Peruvian bark infused in wine or brandy, with as much rhubarb as will keep the body gently open, is an excellent medicine in this case. The DILUTED ACID OF VITRIOL is also a good medicine, and may be taken in the dose of fifteen or twenty drops, twice or thrice a-day in a glass of wine or water. It has been said that habitual vomitings are sometimes alleviated by making oysters a principal part of diet.

A vomiting which proceeds from acidities in the stomach is relieved by alkaline purges. The best medicine of this kind is the magnesia alba, a tea-spoonful of which may be taken in a cupful of tea or a little milk three or four times a-day, or oftener if necessary, to keep the body open.

When vomiting proceeds from violent passions or affections of the mind, all evacuants must be carefully avoided, especially vomits. These are exceedingly dangerous. The patient in this case ought to be kept perfectly easy and quiet, to have the mind soothed, and to take some gentle cordial, as negus, or a little brandy and water, to which a few drops of laudanum may occasionally be added.

When vomiting proceeds from spasmodic affections of the stomach, musk, castor, and other antispasmodic medicines, are of use. Warm and aromatic plasters have likewise a good effect. The stomach plaster (i. e. the COMPOUND PLASTER OF LAUDANUM) of the London or Edinburgh dispensatory may be applied to the pit of the stomach, or a plaster of THERIACA, which will answer rather better. Aromatic medicines may likewise be taken inwardly, as cinnamon or mint-tea, wine with spiceries boiled in it, &c. The region of the stomach may be rubbed with æther, or, if that cannot be had, with strong brandy, or other spirits. The belly should be fomented with warm water, or the patient immersed up to the breast in a warm bath.

Saline draughts, taken in the act of effervescence, are of singular use in stopping a vomit, from whatever cause it proceeded. These may be prepared by dissolving a drachm of the salt of tartar in an ounce and a half of fresh lemon-juice, and adding to it an ounce of pepperment-water the same quantity of simple cinnamon-water, and a little white-sugar. This draught must be swallowed before the effervescence is quite over, and may be repeated every two hours, or oftener, if the vomiting be violent. A violent vomiting has sometimes been stopped by cupping on the region of the stomach, after all other means had failed.

As the least motion will often bring on the vomiting again, even after it has been stopped, the patient must avoid all manner of action. The diet must be so regular as to sit easy upon the stomach, and nothing should be taken that is hard of digestion. We do not however mean that the patient should live entirely upon slops. Solid food, in this case, often sits easier on the stomach than liquids.

CHAP. XXXII.

OF THE DIABETES, AND OTHER DISORDERS OF THE KIDNEYS AND BLADDER.

THE diabetes is a frequent and excessive discharge of urine. It is seldom to be met with among young people; but often attacks persons in the decline of life, especially those who follow the more violent employments, or have been hard drinkers in their youth.

CAUSES.——A diabetes is often the consequence of acute diseases, as fevers, fluxes, &c. where the patient has suffered by excessive evacuations; it may also be occasioned by great fatigue, as riding long journies upon a hard-trotting horse, carrying heavy burdens, running, &c. It may be brought on by hard drinking, or the use of strong stimulating diuretic medicines, as tincture of cantharides, spirits of turpentine, and such like. It is often the effect of drinking too great quantities of mineral waters. Many imagine that these will do them no service unless they be drank in great quantities, by which mistake it often happens that they occasion worse diseases than those they were intended to cure. In a word, this disease may either proceed from too great a laxity of the organs which secrete the urine, from something that stimulates the kidneys too much, or from a thin dissolved state of the blood, which makes too much of it run off by the urinary passages.

SYMPTOMS.——In a diabetes, the urine generally exceeds in quantity all the liquid food which the patient takes. It is thin and pale, of a sweetish taste, and an agreeable smell. The patient has a continual thirst, with some degree of fever; his mouth is dry, and he spits frequently a frothy spittle. The strength fails, the appetite decays, and the flesh wastes away till the patient is reduced to skin and bone.—There is a heat of the bowels; and frequently the loins, testicles, and feet, are swelled.

This disease may generally be cured at the beginning; but after it has continued long, the cure becomes very difficult. In drunkards, and very old people, a perfect cure is not to be expected.

REGIMEN.——Every thing that stimulates the urinary passages, or tends to relax the habit, must be avoided. For this reason the patient should live as much as possible on animal food. His thirst may be quenched with acids; as sorrel, juice of lemon, or vinegar. The mucilaginous vegetables, as rice, sago and salop, with milk, are the most proper food. Of animal substances, shell-fish are to be preferred; as oysters, crabs, &c.

The drink may be Bristol-water. When that cannot be obtained, lime-water, in which a due proportion of oak bark has been macerated, may be used: compound decoction of chalk (the white decoction), with isinglass dissolved in it, is likewise a very proper drink.

The patient ought daily to take exercise, but it should be so gentle as not to fatigue him. He should lie upon a hard bed or mattrass. Nothing hurts the kidneys more than lying too soft. A warm dry air, the use of the flesh-brush, and every thing that promotes perspiration, is of service. For this reason the patient ought to wear flannel next his skin. A large strengthening-plaster may be applied to the back.

MEDICINE.———Gentle purges, if the patient be not too much weakened by the disease, have a good effect. They may consist of rhubarb, with cardamum seeds, or any other spiceries, infused in wine, and may be taken in such quantities as to keep the body gently open.

The patient must next have recourse to astringents and corroborants. Half a drachm of powder made of equal parts of alum and the inspissated juice of catechu, commonly called TERRA JAPONICA, may be taken four times a-day, or oftener, if the stomach will bear it. The alum must first be melted in a crucible; afterwards they may both be pounded together. Along with every dose of this powder the patient may take a tea-cupful of the INFUSION OF ROSES.

If the patient's stomach cannot bear the alum in substance, whey may be made of it, and taken in the dose of a tea-cupful three or four times a-day. The alum-whey is prepared by boiling two English quarts of milk over a slow fire, with three drachms of alum, till the curd separates.

Opiates are of service in this disease, even though the patient rests well. They take off spasm and irritation, and at the same time lessen the force of the circulation. Ten or twelve drops of liquid laudanum may be taken in a cup of the patient's drink three or four times a-day. As a general caution however against the indiscriminate exhibition of large doses of opium continued for any length of time, it is always proper to interpose a laxative once in two days, and, where the symptoms are not very urgent, to intermit the use of opium for twelve or twenty-four hours.

The best corroborants which we know, are cinchona (the Peruvian bark) and wine. A drachm of bark may be taken in a glass of red port or claret three times a-day. The medicine will be both more efficacious and less disagreeable, if fifteen or twenty drops of the acid elixir of vitriol be added to each dose. Such as cannot take the bark in substance may use the decoction, mixed with an equal quantity of red wine, sharpened as above.

There is a disease incident to labouring people in the decline of life, called an INCONTINENCY of URINE. But this is very different from a diabetes, as the water passes off involuntarily by drops, and does not exceed the usual quantity. This disease is rather troublesome than dangerous. It is owing to the relaxation of the sphincter of the bladder, and is often the effect of a palsy. Sometimes it proceeds from hurts, or injuries occasioned by blows, bruises, preternatural labours, &c. Sometimes it is the effect of a fever. It may likewise be occasioned by a long use of strong diuretics, or of stimulating medicines injected into the bladder.

This disease may be mitigated by the use of astringent and corroborating medicines, such as have been mentioned above; but we do not remember ever to have seen it cured.

OF A SUPPRESSION OF URINE.

IT has already been observed, that, a suppression of urine may proceed from various causes; as an inflammation of the kidneys or bladder; small stones or gravel lodging in the urinary passages, hard FÆCES lying in the RECTUM, pregnancy, a spasm or contraction of the

neck of the bladder, clotted blood in the bladder itself, a swelling of the hæmorrhoidal veins, &c.

Some of these cases require the catheter both to remove the obstructing matter, and to draw off the urine; but as this instrument can only be managed with safety by persons skilled in surgery, we shall say nothing further of its use. A bougie may be used by any cautious hand, and will often succeed better than the catheter.

We would chiefly recommend in all obstructions of urine, fomentations and evacuants. Bleeding, as far as the patient's strength will permit, is necessary, especially where there are symptoms of topical inflammation. Bleeding in this case not only abates the fever, by lessening the force of the circulation, but, by relaxing the solids, it takes off the spasm or stricture upon the vessels, which occasioned the obstructions.

After the bleeding, fomentations must be used. These may either consist of warm water alone, or of decoctions of mild vegetables; as mallows, camomile-flowers, &c. Cloths dipped in these may either be applied to the part affected, or a large bladder filled with the decoction may be kept continually upon it. Some put the herbs themselves into a flannel bag, and apply to the part, which is far from being a bad method. These continue longer warm than cloths dipped in the decoction, and at the same time keep the part equally moist.

In all obstructions of the urine, the body ought to be kept open. This is not however to be attempted by strong purgatives, but by emollient clysters, or gentle infusions of senna and manna. Clysters in this case not only open the body, but answer the purpose of an internal fomentation, and greatly assist in removing the spasms of the bladder and parts adjacent.

The food must be light, and taken in small quantities. The drink may be warm broth, or decoctions and infusions of mucilaginous vegetables, as marsh-mallow roots, lime-tree buds, &c. A tea-spoonful of the spirit of nitrous æther (sweet spirits of nitre,) or a drachm of Castile soap, may be frequently put in the patient's drink; and, if there be no inflammation, he may drink small gin-punch.

Persons subject to a suppression of urine ought to live very temperate. Their diet should be light, and their liquor diluting. They should avoid all acids and austere wines, should take sufficient exercise, lie hard, and avoid study and sendentary occupations.

We know a person upwards of seventy years of age, who, labouring under this complaint, had the advice of some of the best practitioners in London; but he assured us that he did not derive so much relief from their prescriptions, as he does from breakfasting constantly on leek-porridge. When leeks are not in season, he takes onions freely. The expressed juice of onions is a powerful diuretic, and may be taken in doses of half an ounce to an ounce and a half, in juniper-water, or gin and water, sweetened with syrup of marsh-mallows.

OF THE GRAVEL AND STONE.

When small stones are lodged in the kidneys, or discharged along with the urine, the patient is said to be afflicted with the gravel. If one of these stones happens to make a lodgment in the bladder for

some time, it accumulates fresh matter, and at length becomes too large to pass off with the urine. In this case the patient is said to have the stone.

CAUSES.——The stone and gravel may be occasioned by high living; the use of strong astringent wines; a sedentary life; lying too hot, soft, or too much on the back; the constant use of water impregnated with earthy or stony particles; aliments of an astringent or windy nature, &c. It may likewise proceed from an hereditary disposition. Persons in the decline of life, and those who have been much afflicted with the gout or rheumatism, are most liable to it.

SYMPTOMS.——Small stones or gravel in the kidneys occasion pain in the loins, sickness, vomiting, and sometimes bloody urine. When the stone descends into the URETER, and is too large to pass along with ease, all the above symptoms are increased; the pain extends towards the bladder; the thigh and leg of the affected side are benumbed; the testicles drawn upwards, and the urine is obstructed.

A stone in the bladder is known from a pain at the time, as well as before and after making water; from the urine coming away by drops, or stopping suddenly when it was running in a full stream; by a violent pain in the neck of the bladder upon motion, especially on horseback, or in a carriage on a rough road; from a white, thick, copious stinking mucous sediment in the urine, from an itching in the top of the PENIS; from bloody urine; from an inclination to go to stool during the discharge of urine; from the patient's passing his urine more easily when lying than in an erect posture; from a kind of convulsive motion occasioned by the sharp pain in discharging the last drops of the urine; and, lastly, from sounding or searching with the catheter.

REGIMEN.——Persons afflicted with the gravel or stone should avoid aliments of a windy or heating nature, as salt meats, sour fruits, &c. Their diet ought chiefly to consist of such things as tend to promote the secretion of urine, and to keep the body open. Artichokes, asparagus, spinage, lettuce, parsly, succory, purslane, turnips, potatoes, carrots, and radishes, may be safely eaten. Onions, leeks, and cellery are, in this case, reckoned medicinal. The most proper drinks are whey, butter-milk and water, barley-water, decoctions or infusions of the roots of marsh-mallows, parsly, liquorice, or of other mild mucilaginous vegetables, as linseed, lime-tree buds or leaves, &c. If the patient has been accustomed to generous liquors, he may drink gin and water not too strong.

Gentle exercise is proper; but violent motion is apt to occasion bloody urine. We would therefore advise that it should be taken in moderation. Persons afflicted with the gravel often pass a great number of stones after riding on horseback, or in a carriage; but those who have a stone in the bladder are seldom able to bear these kinds of exercise. Where there is an hereditary tendency in this disease, a sedentary life ought never to be indulged. Were people careful, upon the first symptom of gravel, to observe a proper regimen of diet, and to take sufficient exercise, it might often be carried off, or at least prevented from increasing; but if the same course which occasioned the disease is persisted in, it must be aggravated.

MEDICINE.——In what is called a fit of the gravel, which is commonly occasioned by a stone sticking in the URETER, or some part

of the urinary passages, the patient must be bled; warm fomentations should likewise be applied to the part affected, emollient clysters administered, and diluting mucilaginous liquors drank, &c. The treatment of this case has been fully pointed out under the articles INFLAMMATION OF THE KIDNEYS AND BLADDER, to which we refer.

Dr. Whyte advises patients who are subject to frequent fits of gravel in the kidneys, but have no stone in the bladder, to drink every morning, two or three hours before breakfast, an English pint of oyster or cockle-shell lime-water. The doctor very justly observes, that though this quantity might be too small to have any sensible effect in dissolving a stone in the bladder, yet it may very probably prevent its growth.

When a stone is formed in the bladder, the doctor recommends Alicant soap, and oyster or cockle-shell lime-water, to be taken in the following manner: the patient must swallow every day, in any form that is least disagreeable, an ounce of the internal part of Alicant soap, and drink three or four English pints of oyster or cockle-shell lime-water. The soap is to be divided into three doses; the largest to be taken fasting in the morning early; the second at noon; and the third at seven in the evening, drinking above each dose a large draught of the lime-water; the remainder of which he may take any time betwixt dinner and supper, instead of other liquors.

The patient should begin with a smaller quantity of the lime-water and soap than that mentioned above; at first an English pint of the former and three drachms of the latter may be taken daily. This quantity, however, he may increase by degrees, and ought to persevere in the use of these medicines, especially if he finds any abatement of his complaints, for several months; nay, if the stone be very large, for years. It may likewise be proper for the patient, if he be severely pained, not only to begin with the soap and lime-water in small quantities, but to take the second or third lime-water instead of the first. However, after he has been for some time accustomed to these medicines, he may not only take the first water, but if he finds he can easily bear it, heighten its dissolving power still more by pouring it a second time on fresh calcined shells.

The caustic alkali, or soap lees (i. e. WATER OF PURE KALI,) is the medicine chiefly in vogue at present for the stone. It is of a very acrid nature, and ought therefore to be given in some gelatinous or mucilaginous liquor; as veal-broth, new-milk, linseed-tea, a solution of gum-arabic, or a decoction of marsh-mallow roots. The patient must begin with small doses of the lees, as thirty or forty drops, and increase by degrees, as far as the stomach can bear it.

The caustic alkali, now called AQUA KALI PURI, may be prepared by mixing two parts of quick-lime with one of pot-ashes, and suffering them to stand till the lixivium be formed, which must be carefully filtrated before it be used. If the solution does not happen readily, a small quantity of water may be added to the mixture.

Though the soap-lees and lime-water are the most powerful medicines which have hithe to been discovered for the stone, yet there are some things of a more simple nature, which in certain cases are found to be beneficial, and therefore deserve a trial. An infusion of the seeds of DAUCUS SYLVESTRIS, or wild carrot, sweetened with

honey has been found to give considerable ease in cases where the stomach could not bear any thing of an acrid nature. A decoction of raw coffee-berries taken morning and evening, to the quantity of eight or ten ounces, with ten drops of SPIRIT OF NITROUS ETHER (sweet spirit of nitre), sweetened with honey, has likewise been found very efficacious in bringing away large quantities of earthy matter in flake

The only other medicine which we shall mention is the UVA URSI. It has been greatly extolled of late both for the gravel and stone. It seems however to be in all respects inferior to the soap and lime water; but it is less disagreeable, and has frequently, to my knowledge, relieved gravelly complaints. It is generally taken in powder from half a drachm to a whole drachm, two or three times a day. It may however be taken to the quantity of seven or eight drachms a-day, with great safety and good effect.

In violent fits of the disorder, the SEMICUPIUM or the warm bath good: the body should be kept moderately open by a solution of VITRIOLATED MAGNESIA, or by the electuary of senna, castor-oil, or the infusion of senna.

CHAP. XXXIII.

OF INVOLUNTARY DISCHARGES OF BLOOD.

SPONTANEOUS or involuntary discharges of blood often happen from various parts of the body. These however are so far from being always dangerous, that they often prove salutary. When such discharges are critical, which is frequently the case in fevers, they ought not to be stopped. Nor indeed is it proper at any time to stop them, unless they be so great as to endanger the patient's life. Most people, afraid of the smallest discharge of blood from any part of the body, fly immediately to the use of styptic and astringent medicines, by which means an inflammation of the brain, or some other fatal disease, is occasioned, which, had the discharge been allowed to go on, might have been prevented.

Periodical discharges of blood, from whatever part of the body they proceed, must not be stopped. They are always the efforts of Nature to relieve herself; and fatal diseases have often been the consequence of obstructing them. It may indeed be sometimes necessary to check the violence of such discharges; but even this requires the greatest caution. Instances might be given where the stopping of a small periodical flux of blood from one of the fingers has proved fatal to the patient.

In the early period of life, bleeding at the nose is very common. Those who are farther advanced in years are more liable to hæmoptoe, or discharge of blood from the lungs. After the middle period of life, hæmorrhoidal fluxes are most common; and in the decline of life, discharges of blood from the urinary passages.

Involuntary fluxes of blood may proceed from very different and often from quite opposite causes. Sometimes they are owing to a particular construction of the body, as a sanguine temperament, a laxity of the vessels, a plethoric habit, &c. At other times they proceed from a determination

of the blood towards one particular part, as the head, the hæmorrhoidal veins, &c. They may likewise proceed from an inflammatory disposition of the blood, in which case there is generally some degree of fever: this likewise happens when the flux is occasioned by an obstructed perspiration, or a stricture upon the skin, the bowels, or any particular part of the system.

But a dissolved state of the blood will likewise occasion hæmorrhages. Thus, in putrid fevers, the dysentery, the scurvy, the malignant small-pox, &c. there are often very great discharges of blood from different parts of the body. They may likewise be brought on by too liberal an use of medicines which tend to dissolve the blood, as cantharides, the volatile alkaline salts, &c. Food of an acrid or irritating quality may likewise occasion hæmorrhages; as also strong purges and vomits, or any thing that greatly stimulates the bowels.

Violent passions or agitations of the mind will likewise have this effect. These often cause bleeding at the nose, and I have known them sometimes occasion an hæmorrhage in the brain. Violent effort, of the body, by over straining or hurting the vessels may have the same effect, especially when the body is long kept in an unnatural posture, as hanging the head very low, &c.

The cure of an hæmorrhage must be adapted to its cause. When it proceeds from too much blood, or a tendency to inflammation, bleeding with gentle purges and other evacuations, will be necessary. It will likewise be proper for the patient in this case to live chiefly upon a vegetable diet, to avoid all strong liquors, and food that is of an acrid, hot, or stimulating quality. The body should be kept cool, and the mind easy.

When an hæmorrhage is owing to a putrid or dissolved state of the blood, the patient ought to live chiefly upon acid fruits with milk, and vegetables of a nourishing nature, as sago, salop, &c. His drink may be wine diluted with water, and sharpened with the juice of lemon, vinegar, or DILUTED ACID OF VITRIOL. The best medicine in this case is the Peruvian bark, which may be taken according to the urgency of the symptoms.

When a flux of blood is the effect of acrid food, or of strong stimulating medicines, the cure is to be effected by soft and mucilaginous diet. The patient may likewise take frequently about the bulk of a nutmeg of Locatelli's balsam, or the same quantity of spermaceti.

When an obstructed perspiration, or a stricture upon any part of the system, is the cause of an hæmorrhage, it may be removed by drinking warm diluting liquors, lying a-bed, bathing the extremities in warm water &c.

OF BLEEDING AT THE NOSE.

BLEEDING at the nose is commonly preceded by some degree of quickness of the pulse, flushing in the face, pulsation of the temporal arteries, heaviness in the head, dimness of the sight, heat and itching of the nostrils, &c.

To persons who abound with blood, this discharge is very salutary. It often cures a vertigo, the head-ach, a phrenzy, and even an epilepsy. In fevers where there is a great determination of blood towards the head

it is of the utmost service. It is likewise beneficial in inflammations of the liver and spleen, and often in the gout and rheumatism. In all diseases where bleeding is necessary, a spontaneous discharge of blood from the nose is of much more service than the same quantity let with a lance.

In a discharge of blood from the nose the great point is to determine whether it ought to be stopped or not. It is a common practice to stop the bleeding, without considering whether it be a disease, or the cure of a disease. This conduct proceeds from fear; but it has often bad and sometimes fatal consequences.

When a discharge of blood from the nose happens in an inflammatory disease, there is always reason to believe that it may prove salutary; and therefore it should be suffered to go on, at least as long as the patient is not weakened by it.

When it happens to persons in perfect health, who are full of blood, it ought not to be suddenly stopped, especially if the symptoms of plethora, mehtioned above, have preceded it. In this case it cannot be stopped without risking the patient's life.

In fine, whenever bleeding at the nose relieves any bad symptom, and does not proceed so far as to endanger the patient's life, it ought not to be stopped. But when it returns frequently, or continues till the pulse becomes low, the extremities begin to grow cold, the lips pale, or the patient complains of being sick or faint, it must immediately be stopped.

For this purpose the patient should be set nearly upright, with his head reclining a little, and his legs immersed in water about the warmth of new milk. His hands ought likewise to be put in lukewarm water, and his garters may be tied a little tighter than usual. Ligatures may be applied to the arms, about the place where they are usually made for bleeding, and with nearly the same degree of tightness. These must be gradually slackened as the blood begins to stop, and removed entirely as soon as it gives over.

Sometimes dry lint put up the nostrils will stop the bleeding. When this does not succeed, dossils of lint dipped in strong spirits of wine may be put up the nostrils, or if that cannot be had, they may be dipped in brandy. Blue vitriol dissolved in water may likewise be used for this purpose; or a tent dipped in the white of an egg well beat up, may be rolled in a powder made of equal parts of white sugar, burnt alum, and white vitriol, and put up the nostril from whence the blood issues.

Internal medicines can hardly be of use here, as they have seldom time to operate. It may not however be amiss to give the patient half an ounce of vitriolated natron (Clauber's salt), and the same quantity of manna dissolved in four or five ounces of barley-water. This may be taken at a draught, and repeated, if it does not operate in a few hours. Ten or twelve grains of nitre may be taken in a glass of cold water and vinegar every hour, or oftener, if the stomach will bear it. If a stronger medicine be necessary, a tea-cupful of the infusion of roses, with twenty or thirty drops of the weak spirit of vitriol, may be taken every hour. When these things cannot be had, the patient may drink water, with a little common salt in it, or equal parts of water and vinegar. From ten to twenty drops of the oil of turpentine in a little water, given frequently, seldom fails to stop a bleeding at the nose, or from any other part.

If the genitals be immersed for some time incold water, it will gene-

rally stop a bleeding at the nose. I have not known this fail; or cloths dipped in cold water may be applied to the TESTES or PUDENDA.

Sometimes, when the bleeding is stopped outwardly, it continues inwardly. This is very troublesome, and requires particular attention, as the patient is apt to be suffocated with the blood, especially if he falls asleep, which he is very ready to do after loosing a great quantity of blood.

When the patient is in danger of suffocation from the blood getting into his throat, the passages may be stopped by drawing threads up the nostrils, and bringing them out at the mouth, then fastening pieces of sponge or small rolls of linen cloth to their extremities; afterwards drawing them back, and tying them on the outside with a sufficient degree of tightness.

After the bleeding is stopped, the patient ought to be kept as easy and quiet as possible. He should not pick his nose, nor take away the tents or clotted blood till they fall off of their own accord, and should not lie with his head low.

Those who are affected with frequent bleeding at the nose, ought to bathe their feet often in warm water, and to keep them warm and dry. They ought to wear nothing tight about their necks, to keep their body as much in an erect posture as possible, and never to view any object obliquely. If they have too much blood, a vegetable diet, with now and then a cooling purge, is the safest way to lessen it.

But when the disease proceeds from a thin dissolved state of the blood, the diet should be rich and nourishing; as strong broths and jellies, sago-gruel with wine and sugar, &c. Infusions of the Peruvian bark in wine ought likewise to be taken, and persisted in for a considerable time.

OF THE BLEEDING AND BLIND PILES.

A DISCHARGE of blood from the hæmorrhoidal vessels is called the BLEEDING PILES. When the vessels only swell, and discharge no blood, but are exceeding painful, the disease is called the BLIND PILES.

Persons of loose spongy fibre; of a bulky size, who live high, and lead a sedentary, inactive life, are most subject to this disease. It is often owing to an hereditary disposition. Where this is the case, it attacks persons more early in life than when it is accidental. Men are more liable to it than women, especially those of a sanguine, plethoric, or a scorbutic habit, or of a melancholy disposition.

The piles may be occasioned by an excess of blood, by strong aloetic purges, high-seasoned food, drinking great quantities of sweet wines, the neglect of bleeding or other customary evacuations, much riding, great costiveness, or any thing that occasions hard or difficult stools. Anger, grief, or other violent passions, will likewise occasion the piles. I have often known them brought on by sitting on the damp ground. A pair of thin breeches will excite the disorder in a person who is subject to it, and sometimes even in those who never had it before. Pregnant women are often afflicted with the piles.

A flux of blood from the ANUS is not always to be treated as a disease. It is even more salutary than bleeding at the nose, and often prevents or carries off diseases. It is peculiarly beneficial in the gout, rheumatism, asthma, and hypochondriacal complaints, and often proves critical in colics and inflammatory fevers.

In the management of the patient, regard must be had to his habit of body, his age, strength, and manner of living. A discharge which might be extensive and prove hurtful to one, may be very moderate and even salutary to another. That only is to be esteemed dangerous which continues too long, and is in such quantity as to waste the patient's strength, hurt the digestion, nutrition, and other functions necessary to life.

When this is the case, the danger must be checked by a proper regimen and astringent medicines. The diet must be cool but nourishing, consisting chiefly of bread, milk, cooling vegetables, and broths. The drink may be chalybeate water, orange-whey, decoctions or infusions of the astringent and mucilaginous plants, as the tormental root, bistort, the marsh-mallow root, &c.

Old conserve of red roses is a very good medicine in this case. It may be mixed with new milk, and taken in the quantity of an ounce three or four times a-day. This medicine is in no great repute, owing to its being seldom taken in such quantity as to produce any effects; but when taken as here directed, and duly persisted in, I have known it perform very extraordinary cures in violent hæmorrhages, especially when assisted by the tincture of roses; a tea-cupful of which may be taken about an hour after every dose of conserve.

CINCHONA (the Peruvian bark) is likewise proper in this case, both as a strengthener and astringent. Half a drachm of it may be taken in a glass of red wine, sharpened with a few drops of elixir of vitriol, three or four times a-day.

The bleeding piles are sometimes periodical, and return regularly once a month, or once in three weeks. In this case they are always to be considered as a salutary discharge, and by no means to be stopped. Some have entirely ruined their health by stopping a periodical discharge of blood from the hæmorrhoidal veins.

In the BLIND PILES bleeding is generally of use. The diet must be light and thin, and drink cool and diluting. It is likewise necessary that the body be kept gently open. This may be done by small doses of the flower of brimstone and cream of tartar. These may be mixed in equal quantities, and a tea-spoonful taken two or three times a-day or oftener if necessary. Or an ounce of the flower of brimstone and half an ounce of purified nitre may be mixed with three or four ounces of the electuary of senna, and a tea-spoonful of it taken three or four times a-day.

Emollient clysters are here likewise beneficial; but there is sometimes such an astriction of the anus, that they cannot be thrown up. In this case I have known a vomit have a very good effect.

When the piles are exceeding painful and swelled, but discharge nothing, the patient must set over the steams of warm water. He may likewise apply a linen cloth dipped in warm spirits of wine to the part, or poultices made of bread and milk, or of leeks fried with butter. If these do not produce a discharge, and the piles appear large, leeches must be applied as near them as possible, or if they will fix upon the piles themselves, so much the better. When leeches will not fix, the piles may be opened with a lancet. The operation is very easy, and is attended with no danger.

Various ointments and other external applications are recommended in

the piles; but I do not remember to have seen any effects from these worth mentioning. Their principal use is to keep the part moist, which may be done as well by a soft poultice, or an emollient cataplasm. When the pain however is very great, a liniment made of two ounces of emollient ointment, and half an ounce of TINCTURE OF OPIUM (liquid laudanum), beat up with the yolk of an egg, may be applied.

We cannot here forbear to make more generally known the method of curing the BLIND PILES by dilatation of the rectum. A striking instance of this practice is related in a foreign medical repository, of the radical cure of a very obstinate hæmorrhoidal affection by simply introducing a tent of rolled tow, smeared with hog's lard, about two inches long, and an inch in diameter at the basis, into the anus, after every evacuation. This simple practice answered the intention completely, after a variety of other measures had failed.

SPITTING OF BLOOD.

We mean here to treat of that discharge of blood from the lungs only which is called an HAEMOPTOE, or SPITTING OF BLOOD. Persons of slender make, and a lax fibre, who have long necks and strait breasts, are most liable to this disease. It is most common in the spring, and generally attacks people before they arrive at the prime or middle period of life. It is a common observation, that those who have been subject to bleeding at the nose when young, are afterwards most liable to an hæmoptoe.

CAUSES.——An hæmoptoe may proceed from excess of blood, from a peculiar weakness of the lungs, or a bad conformation of the breast. It is often occasioned by excessive drinking, running, wrestling, singing, or speaking aloud. Such as have weak lungs ought to avoid all violent exertions of the organ, as they value life. They should likewise guard against violent passions, and every thing that occasions a rapid circulation of the blood.

This disease may likewise proceed from wounds of the lungs. These may either be received from without, or they may be occasioned by hard bodies getting into the wind-pipe, and so falling down upon the lungs, and hurting that tender organ. The obstruction of any customary evacuation may occasion a spitting of blood; as neglect of bleeding or purging at the usual seasons, the stoppage of the bleeding piles in men, or the menses in women, &c. It may likewise proceed from a polypus, schirrous concretions, or any thing that obstructs the circulation of the blood in the lungs. It is often the effect of a long and violent cough, in which case it is generally the forerunner of consumption. A violent degree of cold suddenly applied to the external parts of the body will occasion an hæmoptoe. It may likewise be occasioned by breathing air which is too much rarified to be able properly to expand the lungs. This is often the case with those who work in hot places, as furnaces, glass-houses, or the like. It is likewise said to happen to such as ascend to the top of very high mountains, as the Peak of Teneriff, &c.

Spitting of blood is not always to be considered as a primary disease. It is often only a symptom, and in some diseases not an unfavourable one. This is the case in pleurisies, peripneumonies, and sundry other fevers.

In a dropsy, scurvy, or consumption, it is a bad symptom, and shews that the lungs are ulcerated.

SYMPTOMS.——Spitting of blood is generally preceded by a sense of weight, and oppression of the breast, a dry tickling cough, hoarseness, and a difficulty of breathing. Sometimes it is ushered in with shivering, coldness of the extremities, costiveness, great lassitude, flatulence, pain of the back and loins, &c. As these shew a general stricture upon the vessels, and a tendency of the blood to inflammation, they are commonly the forerunners of a very copious discharge. The above symptoms do not attend a discharge of blood from the gums or fauces, by which means these may always be distinguished from an hæmoptoe. Sometimes the blood that is spit up is thin, and of a florid red colour; and at other times it is thick, and of a dark or blackish colour: nothing however can be inferred from this circumstance, but that the blood has lain a longer or shorter time in the breast before it was discharged.

Spitting of blood, in a strong healthy person, of a sound constitution, is not very dangerous; but when it attacks the tender and delicate, or persons of a weak lax fibre, it is with difficulty removed. When it proceeds from a schirrus or polypus of the lungs, it is bad. The danger is greater when the discharge proceeds from the rupture of a large vessel than of a small one. When the extravasated blood is not spit up, but lodges in the breast, it corrupts, and greatly increases the danger. When the blood proceeds from an ulcer in the lungs it is generally fatal.

REGIMEN.——The patient ought to be kept cool and easy. Every thing that heats the body or quickens the circulation increases the danger. The mind ought likewise to be soothed, and every occasion of exciting the passions avoided. The diet should be soft, cooling, and slender; as rice boiled with milk, small broths, barley-gruels, panado, &c. The diet, in this case, can scarce be too low. Even water-gruel is sufficient to support the patient for some days. All strong liquors must be avoided. The patient may drink milk and water, barley-water, whey, butter-milk, and such like. Every thing however should be drank cold, and in small quantities at a time. He should observe the strictest silence, or at least speak with a very low voice.

MEDICINE.——This, like the other involuntary discharges of blood, ought not to be suddenly stopped by astringent medicines. More mischief is often done by these than if it were suffered to go on. It may however proceed so far as to weaken the patient, and even endanger his life; in which case proper means must be used for restraining it.

The body should be kept gently open by laxative diet; as roasted apples, stewed prunes and such like. If these should not have the desired effect, a tea-spoonful of the lenitive electuary may be taken twice or thrice a-day, as is found necessary. If the bleeding proves violent, ligatures may be applied to the extremities, as directed for a bleeding at the nose.

If the patient be hot or feverish, bleeding and small doses of nitre will be of use; a scruple or half a drachm of nitre may be taken in a cup of his ordinary drink twice or thrice a-day. His drink may likewise be sharpened with acids, as juice of lemon, or a few drops of the spirit of vitriol; or he may take frequently a cup of the INFUSION OF ROSES.

Bathing the feet and legs in lukewarm water has likewise a very good effect in this disease. Opiates too are sometimes beneficial; but these must be administered with caution. Ten or twelve drops of laudanum may be given in a cup of barley-water twice a-day, and continued for some time, provided they be found beneficial.

The conserve of roses is likewise a very good medicine in this case, provided it be taken in sufficient quantity, and long enough persisted in. It may be taken to the quantity of three or four ounces a-day; and if the patient be troubled with a cough, it should be made into an electuary with balsamic syrup and a little of the syrup of white poppies.

If strong astringents be necessary, fifteen or twenty drops of the diluted acid of vitriol may be given in a glass of water three or four times a-day.

Those who are subject to frequent returns of this disease should avoid all excess. Their diet should be light and cool, consisting chiefly of milk and vegetables. Above all, let them beware of vigorous efforts of the body and violent agitations of the mind.

VOMITING OF BLOOD.

This is not so common as the other discharges of blood which have already been mentioned; but it is very dangerous, and requires particular attention.

Vomiting of blood is generally preceded by pain of the stomach, sickness, and nausea; and is accompanied with great anxiety, and frequent fainting fits.

This disease is sometimes periodical; in which case it is less dangerous. It often proceeds from an obstruction of the menses in women, and sometimes from the stopping of the hæmorrhoidal flux in men. It may be occasioned by any thing that greatly stimulates or wounds the stomach, as strong vomits or purges, acrid poisons, sharp or hard substances taken into the stomach, &c. It is often the effect of obstructions in the liver, the spleen, or some of the other viscera. It may likewise proceed from external violence, as blows or bruises, or from any of the causes which produce inflammation.

A great part of the danger in this disease arises from the extravasated blood lodging in the bowels, and becoming putrid, by which means a dysentery or putrid fever may be occasioned. The best way of preventing this, is to keep the body gently open, by frequently exhibiting emollient clysters. Purges must not be given till the discharge is stopt, otherwise they will irritate the stomach, and increase the disorder. All the food and drink must be of a mild cooling nature, and taken in small quantities. Even drinking cold water has sometimes proved a remedy, but it will succeed better when sharpened with the weak spirits of vitriol. When there are signs of an inflammation, bleeding may be necessary; but the patient's weakness will seldom permit it. Opiates may be of use; but they must be given in very small doses, as four or five drops of liquid laudanum twice or thrice a-day.

After the discharge is over, as the patient is generally troubled with gripes, occasioned by the acrimony of the blood lodged in the intestines, gentle purges will be necessary.

OF BLOODY URINE.

THIS is a discharge of blood from the vessels of the kidneys or bladder, occasioned by their being either enlarged, broken, or eroded. It is more or less dangerous according to the different circumstances which attend it.

When pure blood is voided suddenly without interruption and without pain, it proceeds from the kidneys; but if the blood be in small quantity, of a dark colour, and emitted with heat and pain about the bottom of the belly, it proceeds from the bladder. When bloody urine is occasioned by a rough stone descending from the kidneys to the bladder, which wounds the *ureters*, it is attended with a sharp pain in the back, and difficulty of making water. If the coats of the bladder are hurt by a stone, and the bloody urine follows, it is attended with the most acute pain, and a previous stoppage of urine.

Bloody urine may likewise be occasioned by falls, blows, the lifting or carrying of heavy burdens, hard riding, or any violent motion. It may also proceed from ulcers of the bladder, from a stone lodged in the kidneys, or from violent purges, or sharp diuretic medicines, especially cantharides.

Bloody urine is always attended with some degree of danger; but it is peculiarly so when mixed with purulent matter, as this shews an ulcer somewhere in the urinary passages. Sometimes this discharge proceeds from excess of blood, in which case it is rather to be considered as a salutary evacuation than a disease. If the discharge however be very great, it may waste the patient's strength, and occasion an ill habit of body, a dropsy or a consumption.

The treatment of this disorder must be varied according to the different causes from which it proceeds.

When it is owing to a stone in the bladder, the cure depends upon an operation, a description of which would be foreign to our purpose.

If it be attended with a plethora, and symptoms of an inflammation, bleeding will be necessary. The body must likewise be kept open by emollient clysters, or cooling purgative medicines; as cream of tartar, rhubarb, manna, or small doses of lenitive electuary, now called electuary of senna.

When bloody urine proceeds from a dissolved state of the blood, it is commonly the symptom of some malignant disease; as the small-pox, a putrid fever, or the like. In this case the patient's life depends on the liberal use of the Peruvian bark and acids, as has already been shewn.

When there is reason to suspect an ulcer in the kidneys or bladder, the patient's diet must be cool, and his drink of a soft, healing, balsamic quality, as decoctions of marsh-mallow roots, with liquorice, solutions of gum arabic, &c. Three ounces of marsh-mallow roots, and half an ounce of liquorice, may be boiled in two English quarts of water to one: two ounces of gum-arabic, and half an ounce of purified nitre, may be dissolved in the instrained liquor, and a tea-cupful of it taken four or five times a-day.

The early use of astringents in this disease has often bad consequences. When the flux is stopped too soon, the grumous blood, by being confined in the vessels, may produce inflammations, abscesses, and ulcers. If how-

ever the case be urgent, or the patient seems to suffer from the loss of blood, gentle astringents may be necessary. In this case the patient may take three or four ounces of lime-water, with half an ounce of the tincture of Peruvian bark, three times a-day.

OF THE DYSENTERY, OR BLOODY FLUX.

THIS disease prevails in the spring and autumn. It is most common in marshy countries, where, after hot and dry summers, it is apt to become epidemic. Persons are most liable to it who are much exposed to the night air, or who live in places where the air is confined and unwholesome. Hence it often proves fatal in camps, on shipboard, in jails, hospitals, and such like places.

CAUSES.——The dysentery may be occasioned by any thing that obstructs the perspiration, or renders the humours putrid; as damp beds, wet clothes, unwholesome diet, bad air, &c. But it is most frequently communicated by infection. This ought to make people extremely cautious in going near such persons as labour under the disease. Even the smell of the patient's excrements has been known to communicate the infection.

SYMPTOMS.——It is known by a flux of the belly, attended by violent paint of the bowels, a constant inclination to go to stool, and generally more or less blood in the stools. It begins, like other fevers, with chilliness, loss of strength, a quick pulse, great thirst, and an inclination to vomit. The stools are at first greasy and frothy, afterwards they are streaked with blood, and at last have frequently the appearance of pure blood, mixed with small filaments resembling bits of skin. Worms are sometimes passed both upwards and downwards through the whole course of the disease. When the patient goes to stool, he feels a bearing down, as if the whole bowels were falling out, and sometimes a part of the intestine is actually protruded, which proves exceeding troublesome, especially in children. Flatulency is likewise a troublesome symptom, especially towards the end of the disease.

This disease may be distinguished from a diarrhœa, or looseness, by the acute pain of the bowels, and the blood which generally appears in the stools. It may be distinguished from the CHOLERA MORBUS by its not being attended with such violent and frequent fits of vomiting, &c.

When the dysentery attacks the old, the delicate, or such as have been wasted by the gout, the scurvy, or other lingering diseases, it generally proves fatal. Vomiting and hiccuping are bad signs, as they shew an inflammation of the stomach. When the stools are green, black, or have an exceeding disagreeable cadaverous smell, the danger is very great, as it shews the disease to be of the putrid kind. It is an unfavourable symptom when clysters are immediately returned; but still more so when the passage is so obstinately shut, that they cannot be injected. A feeble pulse, coldness of the extremities, with difficulty of swallowing, and convulsions, are signs of approaching death.

REGIMEN.——Nothing is of more importance in this disease than cleanliness. It contributes greatly to the recovery of the patient, and no less to the safety of such as attend him. In all contagious diseases the danger is increased, and the infection spread, by the neglect of cleanli-

ness; but in no more than this. Every thing about the patient should be frequently changed. The excrement should never be suffered to continue in his chamber, but removed immediately and buried under ground. A constant stream of fresh air should be admitted into the chamber; and it ought frequently to be sprinkled with vinegar, juice of lemon, or some other strong acid.

The patient must not be discouraged, but his spirits kept up in hopes of a cure. Nothing tends more to render any putrid disease mortal than the fears and apprehensions of the sick. All diseases of this nature have a tendency to sink and depress the spirits, and when that is increased by fears and alarms from those whom the patient believes to be persons of skill, it cannot fail to have the worst effects.

A flannel waistcoat worn next the skin has often a very good effect in the dysentery. This promotes the perspiration without overheating the body. Great caution however is necessary in leaving it off. I have often known a dysentery brought on by imprudently throwing off a flannel waistcoat before the season was sufficiently warm. For whatever purpose this piece of dress is worn, it should never be left off but in a warm season.

In this disease the greatest attention must be paid to the patient's diet. Flesh, fish, and every thing that has a tendency to turn putrid or rancid on the stomach, must be abstained from. Apples boiled in milk, water-pap, and plain light pudding, with broth made of the gelatinous parts of animals, may constitute the principal part of the patient's food. Gelatinous broth not only answers the purpose of food, but likewise of medicine. I have often known dysenteries, which were not of a putrid nature, cured by it, after pompous medicines had proved ineffectual.

The manner of making this broth is, to take a sheep's head and feet with the skin upon them, and to burn the wool off with a hot iron; afterwards to boil them till the broth is quite a jelly. A little cinnamon or mace may be added, to give the broth an agreeable flavour, and the patient may take a little of it warm with toasted bread three or four times a-day. A clyster of it may likewise be given twice a-day. Such as cannot use the broth made in this way, may have the head and feet skinned; but we have reason to believe that this injures the medicine. It is not our business here to reason upon the nature and qualities of medicine, otherwise this might be shewn to possess virtues every way suited to the cure of a dysentery which does not proceed from a putrid state of the humours. One thing we know, which is preferable to all reasoning, that whole families have often been cured by it, after they had used many other medicines in vain. It will, however, be proper that the patient take a vomit, and a dose or two of rhubarb, before he begins to use the broth. It will likewise be necessary to continue the use of it for a considerable time, and to make it the principal food.

Another kind of food very proper in the dysentery, which may be used by such as cannot take the broth mentioned above, is made by boiling a few handfuls of fine flour, tied in a cloth, for six or seven hours, till it becomes as hard as starch. Two or three table-spoonfuls of this may be grated down, and boiled in such a quantity of new milk and water as to be of the thickness of pap. This may be sweetened to the patient's taste, and taken for his ordinary food.

The learned and humane Dr. Rutherford, late professor of medicine in the University of Edinburgh, used to mention this food in his public lectures with great encomiums. He directed it to be made by tying a pound or two of the finest flour, as tight as possible, in a linen rag; afterwards to dip it frequently in water, and to dredge the outside with flour, till a cake or crust was formed around it, which prevents the water from soaking into it while boiling. It is then to be boiled till it becomes a hard dry mass, as directed above. This, when mixed with milk and water, will not only answer the purpose of food, but may likewise be given in clysters.

In a PUTRID DYSENTERY the patient may be allowed to eat freely of most kinds of good ripe fruit; as apples, grapes, gooseberries, currant-berries, straw-berries, &c. These may be either eaten raw or boiled, with or without milk, as the patient chooses. The prejudice against fruit in this disease is so great, that many believe it to be the common cause of dysenteries. This however is an egregious mistake. Both reason and experience shew, that good fruit is one of the best medicines, both for the prevention and cure of the dysentery. Good fruit is in every respect calculated to counteract that tendency to putrefaction, from whence the most dangerous kind of dysentery proceeds. The patient in such a case ought therefore to be allowed to eat as much fruit as he pleases, provided it be ripe.

The most proper drink in this disorder is whey. The dysentery has often been cured by the use of clear whey alone. It may be taken both for drink and in form of clyster. When they cannot be had, barley-water sharpened with cream of tartar may be drank, or a decoction of barley and tamarinds: two ounces of the former and one of the latter may be boiled in two English quarts of water to one. Warm-water, water-gruel, or water wherein hot iron has been frequently quenched, are all very proper, and may be drank in turns. Camomile-tea, if the stomach will bear it, is an exceeding proper drink. It both strengthens the stomach, and by its antiseptic quality tends to prevent a mortification of the bowels.

MEDICINE.——At the beginning of this disease it is always necessary to cleanse the first passages. For this purpose a vomit of ipecacuanha must be given, and wrought off with weak camomile-tea. Strong vomits are seldom necessary here. A scruple or at most half a drachm of ipecacuanha is generally sufficient for an adult, and sometimes a very few grains will suffice. The day after the vomit, half a drachm or two scruples of rhubarb must be taken; or, what will answer the purpose rather better, an ounce or an ounce and a half of Epsom salts. This dose may be repeated every other day for two or three times. Afterwards small doses of ipecacuanha may be taken for some time. Two or three grains of the powder may be mixed in a table-spoonful of the syrup of white poppies, and taken three times a-day.

These evacuations, and the regimen prescribed above, will often be sufficient to effect a cure. Should it however happen otherwise, the following astringent medicines may be used.

A clyster of starch or fat mutton-broth, with thirty or forty drops of liquid laudanum in it, may be administered twice a-day. At the same time an ounce of gum-arabic, and half an ounce of gum-tragacanth, may

be dissolved in an English pint of barley-water over a slow fire and a table-spoonful of it taken every hour.

If these have not the desired effect, the patient may take, four times a-day, about the bulk of a nutmeg of the electuary of catechu (Japonic confection), drinking after it a tea-cupful of the decoction of logwood, prepared as directed in the Appendix.

Persons who have been cured of this disease are very liable to relapse; to prevent which great circumspection with respect to diet is necessary. The patient must abstain from all fermented liquors, except now and then a glass of good wine; but he must drink no kind of malt liquor. He should likewise abstain from animal food, as fish and flesh, and live principally on milk and vegetables.

Gentle exercise and wholesome air are likewise of importance. The patient should go to the country as soon as his strength will permit, and should take exercise daily on horseback, or in a carriage. He may likewise use bitters, infused in wine or brandy, and may drink twice a-day a gill of lime-water mixed with an equal quantity of new milk.

When dysenteries prevail, we would recommend a strict attention to cleanliness, a spare use of animal food, and the free use of sound ripe fruits and other vegetables. The night air is to be carefully avoided, and all communication with the sick. Bad smells are likewise to be shunned, especially those which arise from putrid animal substances. The necessaries where the sick go are carefully to be avoided.

When the first symptoms of the dysentery appear, the patient ought immediately to take a vomit, to go to bed, and drink plentifully of weak warm liquor to promote a sweat. This with a dose or two of rhubarb at the beginning would often carry off the disease. In countries where dysenteries prevail, we would advise such as are liable to them to take either a vomit or a purge every spring or autumn as a preventive.

There are sundry other fluxes of the belly, as the LIENTERY and CŒLIAC PASSION, which, though less dangerous than the dysentery, yet merit consideration. These diseases generally proceed from a relaxed state of the stomach and intestines, which is sometimes so great, that the food passes through them with hardly any sensible alteration, and the patient dies merely from the want of nourishment.

When the lientery or cœliac passion succeeds to a dysentery, the case is bad. They are always dangerous in old age, especially when the constitution has been broken by excess or acute diseases. If the stools be very frequent, and quite crude, the thirst great, with little urine, the mouth ulcerated, and the face marked with spots of different colours, the danger is very great.

The treatment of the patient is in general the same as in the dysentery. In all obstinate fluxes of the belly, the cure must be attempted by first cleansing the stomach and bowels with gentle vomits and purges; afterwards the Lichen Islandicus, or Iceland-moss, in powder or decoction (as recommended in Consumptions), rice milk, and such a diet has a tendency to heal and strengthen the bowels, with opiates and astringent medicines, will generally complete the cure.

The same observation holds with respect to a TENESMUS, or frequent desire of going to stool. This disease resembles the dysentery so much, both in its symptoms and method of cure, that we think it needless to insist upon it.

CHAP. XXXIV.

OF THE HEAD-ACH.

ACHES and pains proceed from very different causes, and may affect any part of the body; but we shall point out those only which occur most frequently, and are attended with the greatest danger.

When the head ach is slight, and affects a particular part of the head only, it is called cephalalgia; when the whole head is affected, cephalœa; and when on one side only, hemicrania. A fixed pain in the forehead, which may be covered with the end of the thumb, is called the clavis hystericus.

There are also other distinctions. Sometimes the pain is internal, sometimes external; sometimes it is an original disease, and at other times only symptomatic. When the head-ach proceeds from a hot bilious habit, the pain is very acute and throbbing, with a considerable heat of the part affected. When from a cold phlegmatic *habit*, the patient complains of a dull heavy pain, and has a sense of coldness in the part. This kind of head-ach is sometimes attended with a degree of stupidity or folly.

Whatever obstructs the free circulation of the blood through the vessels of the head may occasion a head-ach. In persons of a full habit, who abound with blood, the head-ach often proceeds from the suppression of customary evacuations; as bleeding at the nose, sweating of the feet, &c. It may likewise proceed from any cause that determines a great flux of blood towards the head; as coldness of the extremities, or hanging down the head for a long time. Whatever prevents the return of the blood from the head will likewise occasion a head-ach; as looking long obliquely at any object, wearing any thing tight about the neck, a new hat, or the like.

When a head-ach proceeds from the stoppage of a running at the nose, there is a heavy, obtuse, pressing pain in the fore part of the head, in which there seems to be such a weight, that the patient can scarce hold it up. When it is occasioned by the caustic matter of the venereal disease, it generally affects the skull, and often produces a CARIES of the bones.

Sometimes the head-ach proceeds from the repulsion or retrocession of the gout, the erysipelas, the small-pox, measles, itch, or other eruptive diseases. What is called a hemicrania generally proceeds from crudities or indigestion. Inanition, or emptiness, will often also occasion head-aches. I have often seen instances of this in nurses who gave suck too long, or who did not take sufficient quantity of solid food.

There is likewise a most violent, fixed, constant, and almost intolerable head-ach, which occasions great debility both of body and mind, prevents sleep, destroys the appetite, causes a VERTIGO, dimness of sight, a noise in the ears, convulsions, epileptic fits, and sometimes vomiting, costiveness, coldness of the extremities, &c.

The head-ach is often symptomatic in continual and intermitting fevers, especially quartans: it is likewise a very common symptom in hysteric and hypochondriac complaints.

When a head-ach attends an acute fever, with pale urine, it is an unfavourable symptom. In excessive head-aches, coldness of the extremities is a bad sign.

When the disease continues long, and is very violent, it often terminates in blindness, an apoplexy, deafness, a VERTIGO, the palsy, or the epilepsy.

In this disease the cool regimen in general is to be observed. The diet ought to consist of such emollient substances as will correct the acrimony of the humours and keep the body open; as apples boiled in milk, spinage, turnips, and such like. The drink ought to be diluting; as barley-water, infusions of mild mucilaginous vegetables, decoctions of the sudorific woods, &c. The feet and legs ought to be kept warm, and frequently bathed in lukewarm water; the head should be shaved, and bathed with water and vinegar. The patient ought as much as possible to keep in an erect posture, and not to lie with his head too low.

When the head-ach is owing to excess of blood, or an hot bilious constitution, bleeding is necessary. The patient may be bled in the jugular vein, and the operation repeated if there be occasion. Cupping also, or the application of leeches to the temples and behind the ears, will be of service. Afterwards a blistering-plaster may be applied to the neck behind the ears, or to any part of the head that is most affected. In some cases it will be proper to blister the whole head. In persons of a gross habit, issues or perpetual blisters will be of service. The body ought likewise to be kept open by gentle laxatives, which, where the strength of the patient will admit, should be preceded by two or three brisk cathartics.

But when the head-ach proceeds from a copious vitiated SERUM stagnating in the membranes, either within or without the skull, with a dull, heavy, continual pain, which will neither yield to bleeding nor gentle laxatives, then more powerful purgatives are necessary, as pills made of aloes, resin of jalap, or the like. It will also be necessary in this case to blister the whole head, and to keep the back part of the neck open for a considerable time by a perpetual blister.

When the head-ach is occasioned by the stoppage of a running at the nose, the patient should frequently smell to a bottle of volatile salts; he may likewise take snuff, or any thing that will irritate the nose, so as to promote a discharge from it; as the herb mastich, ground ivy or the compound powder of asarabucca, commonly called CEPHALIC SNUFF.

A HEMICRANIA, especially a periodical one, is generally owing to a foulness of the stomach, for which gentle vomits must be administered, as also purges of rhubarb. After the bowels have been sufficiently cleared, chalybeate waters, and such bitters as strengthen the stomach, will be necessary. A periodical head-ach has been cured by wearing a piece of flannel over the forehead during the night.

When the head-ach arises from a vitiated state of the humours, as in the scurvy and venereal disease, the patient, after proper evacuations, must drink freely of the decoction of woods, or the COMPOUND DECOCTION OF SARSAPARILLA, with raisins and liquorice. These, if duly persisted in, will produce very happy effects. When a collection of matter is felt under the skin, it must be discharged by an incision, otherwise it will render the bone carious.

When the head-ach is so intolerable as to endanger the patient's life, or is attended with continual watching and delirium, recourse must be had to opiates. These, after proper evacuations by clysters or

mild purgatives, may be applied both externally or internally. The affected part may be rubbed with Bate's anodyne balsam, or a cloth dipped in it may be applied to the part. The patient may, at the same time, take twenty drops of *tincture of opium*, in a cup of valerian or penny-royal tea, twice or thrice a-day. This is only to be done in case of extreme pain. Proper evacuations ought always to accompany and follow the use of opiates.

When the patient cannot bear the loss of blood, his feet ought frequently to be bathed in lukewarm water, and well rubbed with a coarse cloth. Cataplasms with mustard or horse-radish ought likewise to be applied to them. This course is peculiarly necessary when the pain proceeds from a gouty humour affecting the head.

When the head-ach is occasioned by great heat, hard labour, or violent exercise of any kind, it may be allayed by cooling medicines; as the saline draughts with nitre, and the like.

A little æther dropt into the palm of the hand, and applied to the forehead, will sometimes remove a violent head-ach; and so will vinegar applied in the same manner, and snuffed up the nose.

OF THE TOOTH-ACH.

This disease is so well known, that it needs no description. It has great affinity with the rheumatism, and often succeeds pains of the shoulders and other parts of the body.

It may proceed from obstructed perspiration, or any of the other causes of inflammation. I have often known the tooth-ach occasioned by neglecting some part of the usual coverings of the head, by sitting with the head bare near an open window, or exposing it to a draught of cold air. Food or drink either too hot or too cold is very hurtful to the teeth. Great quantities of sugar, or other sweet meats, are likewise hurtful. Nothing is more destructive to the teeth than cracking nuts, or chewing any kind of hard substances. Picking the teeth with pins, needles, or any thing that may hurt the enamel with which they are covered, does great mischief, as the tooth is sure to be spoiled whenever the air gets into it. Breeding women are very subject to the tooth-ach, especially during the first three or four months of pregnancy. The tooth-ach often proceeds from scorbutic humours affecting the gums. In this case the teeth are sometimes wasted, and fall out without any considerable degree of pain. The more immediate cause of the tooth-ach is a rotten or CARIOUS tooth.

In order to relieve the tooth-ach, we must first endeavour to lessen the flux of humours to the part affected. This may be done by mild purgatives, scarifying the gums, or applying leeches to them, and bathing the feet frequently with warm water. The perspiration ought likewise to be promoted by drinking freely of weak wine-whey, or other diluting liquors, with small doses of nitre. Vomits too have often an exceeding good effect in the tooth-ach. It is seldom safe to administer opiates, or any kind of heating medicines, or even to draw a tooth, till proper evacuations have been premised; and these alone will often effect the cure.

If this fails, and the pain and inflammation still increase, a suppuration may be expected, to promote which a toasted fig should be

held between the gum and the cheek; bags filled with camomile-flowers, flowers of elder, or the like, may be applied near the part affected, with as great a degree of warmth as the patient can bear, and renewed as they grow cool: the patient may likewise receive the steams of warm water into his mouth through an inverted funnel, or by holding his head over the mouth of a porringer filled with warm water.

Such things as promote the discharge of saliva, or cause the patient to spit, are generally of service. For this purpose, bitter, hot, or pungent vegetables may be chewed; as gentian, a bit of gall, calamus aromaticus, or pellitory of Spain. Allen recommends the root of YELLOW WATER FLOWER-DE-LUCE in this case. This root may either be rubbed upon the tooth, or a little of it chewed. Brookes says he hardly ever knew it fail to ease the tooth-ach. It ought however to be used with caution.

Many other herbs, roots, and seeds, are recommended for curing the tooth-ach; as the leaves or roots of millefoil or yarrow chewed, tobacco smoked or chewed, staves-acre, or the seeds of mustard chewed, &c. These bitter, hot and pungent things, by occasioning a greater flow of SALIVA, frequently give ease in the tooth-ach.

Many women, when they are pregnant, are more than usually liable to pains in the teeth; to procure ease, some persons we have known had submitted to the extraction of sound teeth, and reckoned on "LOSING A TOOTH FOR EVERY CHILD:" in several of these cases we have succeeded by directing the patient to apply from time to time a bit of the pellitory of Spain. If the gums were swollen, they were lanced, and sometimes vitriolic ether was dropped on the affected cheek, the hand being held to the part till that volatile liquor was evaporated: by this simple means, with a little patience, they reserved the remainder of their teeth.

Opiates often relieve the tooth-ach; for this purpose a little cotton wet with the tincture of OPIUM may be held between the teeth; or a drop or two of the oil of cloves, marjoram, or thyme, may be inserted in the cavity of the tooth, or dropped on the lint, or cotton saturated with the tincture; or a piece of sticking plaster about the bigness of a shilling, with a bit of opium in the middle of it, of a size not to prevent the sticking of the other, may be laid on the temporal artery, where the pulsation is most sensible. DE LA MOTTE affirms, that there are few cases wherein this will not give relief. If there be a hollow tooth, a small pill made of equal parts of camphire and opium, put into the hollow, is often beneficial. When this cannot be had, the hollow tooth may be filled with gum mastich, wax, lead, or any substance that will stick in it, and keep out external air.

Few applications give more relief in the tooth-ach than blistering-plasters. These may be applied betwixt the shoulders, but they have the best effect when put behind the ears, and made so large as to cover a great part of the lower-jaw.

After all, when a tooth is carious, it is often impossible to remove the pain without extracting it; and, as a spoilt tooth never becomes sound again, it is prudent to draw it soon, lest it should affect the rest. Tooth-drawing, like bleeding, is very much practised by mechanics as well as persons of the medical profession. The operation however is not without danger, and ought always to be performed

with care. A person unacquainted with the structure of the parts will be in danger of hurting the jaw-bone, or of drawing a sound tooth instead of a rotten one.

When the tooth-ach returns periodically, and the pain chiefly affects the gums, it may be cured by the bark.

Some pretend to have found great benefit in the tooth-ach, from the application of an artificial magnet to the affected tooth. We shall not attempt to account for its mode of operation, but, if it be found to answer, though only in particular cases, it certainly deserves a trial, as it is attended with no expence, and cannot do any harm. Electricity has likewise been recommended, and particular instruments have been invented for sending a shock through the affected tooth.

Persons who have returns of the tooth-ach at certain seasons, as spring and autumn, might often prevent it by taking a purge at these times.

Keeping the teeth clean has no doubt a tendency to prevent the tooth-ach. The best method of doing this is to wash them daily with salt and water, a decoction of the bark, or with cold water, alone. All brushing and scraping of the teeth is dangerous, and unless it be performed with great care, does mischief.

OF THE EAR-ACH.

This disorder chiefly affects the membrane which lines the inner cavity of the ear called the *meatus auditorius.* It is often so violent as to occasion great restlessness, anxiety, and even delirium. Sometimes epileptic fits, and other convulsive disorders, have been brought on by extreme pain in the ear.

The ear-ach may proceed from any of the causes which produce inflammation. It often proceeds from a sudden suppression of perspiration, or from the head being exposed to cold when covered with sweat. It may also be occasioned by worms or other insects getting into the ear, or being bred there; or from any hard body sticking in the ear. Sometimes it proceeds from the translation of morbific matter to the ear. This often happens in the decline of malignant fevers, and occasions deafness, which is generally reckoned a favourable symptom.

When the ear-ach proceeds from insects, or any hard body sticking in the ear, every method must be taken to remove them as soon as possible. The membranes may be relaxed by dropping into the ear oil of sweet almons or olive oil. Afterwards the patient should be made to sneeze, by taking snuff, or some strong sternutatory. If this should not force out the body, it must be extracted by art. I have seen insects, which had got into the ear, come out of their own accord upon pouring in oil, which is a thing they cannot bear.

When the pain of the ear proceeds from inflammation, it must be treated like other topical inflammations, by a cooling regimen, and opening medicines. Bleeding at the beginning, either in the arm or jugular vein, or cupping in the neck, will be proper. The ear may likewise be fomented with steams of warm water, or flannel bags filled with boiled mallows and camomile flowers may be applied to it warm; or bladders filled with warm milk and water. An exceeding good method of fomenting the ear is to apply it close to the mouth of

a jug filled with warm water, or a strong decoction of camomile flowers.

The patient's feet should be frequently bathed in lukewarm water, and he ought to take small doses of nitre and rhubarb, viz. a scruple of the former, and ten grains of the latter, three times a-day. His drink may be whey, or decoctions of barley and liquorice with figs or raisins. The parts behind the ear ought frequently to be rubbed with camphorated oil, or a little of the volatile liniment.

When the inflammation cannot be discussed, a poultice of bread and milk, or roasted onions, may be applied to the ear, and frequently renewed, till the abscess breaks, or can be opened. Afterwards the humours may be delivered from the part by gentle laxatives, blisters, or issues; but the discharge must not be suddenly dried up by any external application.

PAIN OF THE STOMACH, &c.

This may proceed from various causes, as indigestion; wind; the acrimony of the bile; sharp, acrid, or poisonous substances taken into the stomach, &c. It may likewise be occasioned by worms; the stoppage of customary evacuations; a translation of gouty matter to the stomach, the bowels, &c.

Women in the decline of life are very liable to pains of the stomach and bowels, especially such as are afflicted with hysteric complaints. It is likewise very common to hypochondriac men of a sedentary and luxurious life. In such persons it often proves so extremely obstinate as to baffle all the powers of medicine.

When the pain of the stomach is most violent after eating, there is reason to suspect that it proceeds from some fault either in the digestion or the food. In this case the patient ought to change his diet, till he finds what kind of food agrees best with his stomach, and should continue chiefly to use it. If a change of diet does not remove the complaint, the patient may take a gentle vomit and afterwards a dose or two of rhubarb. He ought likewise to take an infusion of camomile-flowers, or some other stomachic bitter, either in wine or water. I have often known exercise remove this complaint, especially sailing, or a long journey on horseback, or in a carriage.

When a pain of the stomach proceeds from flatulency, the patient is constantly belching up wind, and feels an uneasy distention of the stomach after meals. This is a most deplorable disease, and is seldom thoroughly cured. In general, the patient ought to avoid all windy diet, and every thing that sours on the stomach, as greens, roots, &c. This rule however admits of some exceptions. There are many instances of persons very much troubled with wind, who have received great benefit from eating parched pease, though that grain is generally supposed to be of a windy nature. These are prepared by steeping or soaking pease in water, and afterwards drying them in a pot or kiln till they be quite hard. They may be used at pleasure.

This complaint may likewise be greatly relieved by labour, especially digging, reaping, or mowing, or any kind of active employment by which the bowels are alternately compressed and dilated. The most obstinate case of this kind I ever met with was in a person of a sedentary occupation, whom I advised, after he had tried every kind

of medicine in vain, to turn gardener; which he did, and has ever since enjoyed good health.

When a pain of the stomach is occasioned by the swallowing of acrid or poisonous substances, they must be discharged by vomit: this may be excited by butter, oils, or other soft things, which sheath and defend the stomach from the acrimony of its contents.

When pain of the stomach proceeds from a translation of gouty matter, warm cordials are necessary, as generous wines, French brandy, &c. Some have drank a whole bottle of brandy or rum, in this case in a few hours, without being in the least intoxicated, or even feeling the stomach warmed by it. It is impossible to ascertain the quantities necessary upon these occasions. This must be left to the feelings and discretion of the petient. The safer way however is, not to go too far. When there is an inclination to vomit, it may be promoted by drinking an infusion of camomile-flowers, or of CARDOUS BENEDICTUS.

If a pain of the stomach proceed from the stoppage of customary evacuations, bleeding will be necessary, especially in sanguine and very full habits. It will likewise be of use to keep the body gently open by mild purgatives; as rhubarb or senna &c. When this disease affects women in the decline of life, after the stoppage of the MENSES, making an issue in the leg or arm will be of peculiar service.

When the disease is occasioned by worms, they must be destroyed, or expelled by such means as are recommended in the following section.

When the stomach is greatly relaxed and the digestion bad, which often occasion flatulencies, the acid elixir of vitriol will be of singular service. Fifteen or twenty drops of it may be taken in a glass of wine or water twice or thrice a-day.

Persons afflicted with flatulency are generally unhappy unless they be taking some purgative medicines; these, though they may give immediate ease, tend to weaken and relax the stomach and bowels, and consequently increase the disorder. Their best method is to mix purgatives and stomachics together. Equal parts of Peruvian bark and rhubarb may be infused in brandy or wine, and taken in such quantity as to keep the body gently open.

Pain and a grinding sensation occasioned by indigested SORDES in the stomach, we have often known removed by the patient swallowing at bed-time, for two or three nights, three or four cloves of garlic: the external rind must be peeled off, they may then be dipped in oil, or divided by a knife, and taken as pills.

CHAP. XXXV.

OF WORMS.

THESEe c hiefly of three kinds, viz. the tænia, or tape-worm; the teres, or round and long worm; and the ASCARIDES, or round and short worm. There are many other kinds of worms found in the

human body; but as they proceed, in a great measure, from similar causes, have nearly the same symptoms, and require almost the same method of treatment as these already mentioned, we shall not spend time in enumerating them.

The tape-worm is white, very long, and full of joints. It is generally bred either in the stomach or small intestines. The round and long worm is likwise bred in the small guts, and sometimes in the stomach. The round and short worms commonly lodge in the rectum, or what is called the end gut, and occasion a disagreeable itching about the seat.

The long round worms occasion squeamishness, vomiting, a disagreeable breath, gripes, looseness, swelling of the belly, swoonings, loathing of food, and at other times a voracious appetite, a dry cough convulsions, epileptic fits, and sometimes a privation of speech. These worms have been known to perforate the intestines, and get into the cavity of the belly. The effects of the tape-worm are nearly the same with those of the long and round, but rather more violent.

Andry says, the following symptoms particularly attend solium, which is a species of the tape-worm, viz. swoonings, privation of speech, and a voracions appetite. The round worms called a scarides, besides an itching of the anus, cause swooning, and tenesmus, or an inclination to go to stool.

CAUSES.——Worms may proceed from various causes; but they are seldom found except in weak and relaxed stomachs, where the digestion is bad. Sedentary persons are more liable to them than the active and laborious. Those who eat great quantities of unripe fruit, or who live much on raw herbs and roots, are generally subject to worms. There seems to be an hereditary disposition in some persons to this disease. I have often seen all the children of a family subject to worms of a particular kind. They seem likewise frequently to be owing to the nurse. Children of the same family nursed by one woman, have often worms, when those nursed by another have none.

SYMPTOMS.——The common symptoms of worms, are paleness of the countenance, and at other times an universal flushing of the face; itching of the nose; this however is doubtful, as children pick their nose in all diseases; starting, and grinding of the teeth in sleep; swelling of the upper lip; the appetite sometimes bad, at other times quite voracious; looseness; a sour or stinking breath; a hard swelled belly; great thirst; the urine frothy, and sometimes of a whitish colour; griping or colic pains; an involuntary discharge of saliva, especially when asleep; frequent pains of the side, with a dry cough, and unequal pulse; palpitations of the heart; swoonings; drowsiness; cold sweats; palsy; epileptic fits, with many other unaccountable nervous symptoms, which were formerly attributed to witchcraft, or the influence of evil spirits. Small bodies in the excrements resembling melon or cucumber seeds are symptoms of the tape-worms.

I lately saw some very surprising effects of worms in a girl about five years of age, who used to lie for whole hours as if dead. She at last expired, and, upon opening her body, a number of the teres, or long round worms, were found in her guts, which were considerably

inflamed; and what anatomists call an intus susceptio, or involving of one part of the gut within another, had taken place in no less than four different parts of the intestinal canal.

MEDICINE.——A medical writer of the present age as enumerated upwards of fifty British plants, all celebrated for killing and expelling worms; but though numberless medicines are extolled for expelling and killing worms, yet no disease more frequently baffles the physician's skill. In general, the most proper medicines for their expulsion are strong purgatives; and to prevent their breeding, stomachic bitters, with now and than a glass of good wine.

The best purge for an adult is jalap and calomel. Five and twenty or thirty grains of the former with six or seven of the latter, mixed in syrup, may be taken early in the morning, for a dose. It will be proper that the patient keep the house all day, and drink nothing cold. The dose may be repeated once or twice a week, for a fortnight or three weeks. On the intermediate days the patient may take a drachm of the powder of tin, twice or thrice a-day, mixed with syrup, honey, or treacle.

Those who do not choose to take calomel may make use of the bitter purgatives; as aloes, hiera picra, tincture of senna, and rhubarb, &c.

Oily medicines are sometimes found beneficial for expelling worms. An ounce of sallad oil and a table-spoonful of common salt may be taken in a glass of red port wine thrice a-day, or oftener, if the stomach will bear it. But the more common form of using oil is in clysters. Oily clysters, sweetened with sugar or honey, are very efficacious in bringing away the short round worms called ascarides, and likewise the teres.

The Harrogate water is an excellent medicine for expelling worms, especially the ascarides. As this water is impregnated with sulphur, we may hence infer that sulphur alone must be a good medicine in this case, which is found to be a fact. Many practitioners give flour of sulphur in very large doses, and with great success. It should be made into an electuary with honey or treacle, and taken in such quantity as to purge the patient.

Where Harrogate water cannot be obtained, sea-water may be used, which is far from being a contemptable medicine in this case. If sea-water cannot be had, common salt dissolved in water may be drank. I have often seen this used by country nurses with very good effect. Some flour of sulphur may be taken over night, and the salt-water in the morning.

But worms, though expelled, will soon bred again, if the stomach remains weak and relaxed; to prevent which, we would recommend the Peruvian bark. Half a drachm of bark in powder may be taken in a glass of red port wine three or four times a-day, after the above medicines have been used. Lime-water is likewise good for this purpose, or a table-spoonful of the chalybeate wine taken twice or thrice a-day. Infusions or decoctions of bitter herbs may likewise be drank; as the infusion of tansy, water-trefoil, camomile flowers, tops of wormwood, the lesser centaury, &c.

For a child of four or five years old, six grains of rhubarb, five of jalap, and two of calomel, may be mixed in a spoonful of syrup or honey, and given in the morning. The child should keep the house

all day, and take nothing cold. This dose may be repeated twice a-week for three or four weeks. On the intermediate days the child may take a scruple of powdered tin and ten grains of æthiops mineral in a spoonful of treacle twice a-day. This dose must be increased or diminished according to the age of the patient.

Bisset says, the great bastard black hellebore, or BEAR'S FOOT, is a most powerful vermifuge for the long round worms. He orders the decoction of about a drachm of the green leaves, or about fifteen grains of the dried leaves in powder, for a dose to a child between four and seven years of age. This dose is to be repeated two or three times. He adds, that the green leaves made into a syrup with coarse sugar is almost the only medicine he has used for round worms for three years past. Before pressing out the juice, he moistens the bruised leaves with vinegar, which corrects the medicine. The dose is a teaspoonful at bed time, and one or two next morning.

I have frequently known those big bellies, which in children are commonly reckoned a sign of worms, quite removed by giving them white soap in their pottage or other food. Tansy, garlic, and rue, are all good against worms, and may be used various ways. We might here mention many other plants, both for external and internal use, as the cabbage bark, &c. but think the powder, of tin with æthiops mineral, and the purges of rhubarb and calomel, are more to be depended on.

Dr. Ball's purging vermifuge powder is a very powerful medicine: it is made of equal parts of rhubarb, scammony, and calomel, with as much double refined sugar as is equal to the weight of all the other ingredients. These must be well mixed together, and reduced to a fine powder. The dose for a child is from ten grains to twenty, once or twice a-week. An adult may take a drachm for a dose.

Parents who would preserve their children from worms ought to allow them plenty of exercise in the open air; to take care that their food be wholesome and sufficiently solid; and as far as possible, to prevent their eating raw herbs, roots, or green trashy fruits. It will not be amiss to allow a child who is subject to worms a glas of red wine after meals; as every thing that braces and strengthens the stomach is good both for preventing and expelling these vermin.

We think it necessary here to warn people of their danger who buy cakes, powder and other worm medicines, at random from quacks, and give them to their children without proper care. The principial ingredients in most of these medicines is mercury, which is never to be trifled with. I lately saw a shocking instance of the danger of this conduct. A girl, who had taken a dose of worm powder bought of a travelling quack, went out, and perhaps was so imprudent as to drink cold water during its operation: she immediately swelled, and died on the following day, with all the symptoms of having been poisoned.

CHAP. XXXVI.

OF THE JAUNDICE.

THIS disease is first observable in the white of the eye, which appears yellow. Afterwards the whole skin puts on a yellow appearance. The urine too is of a saffron hue, and dyes a white cloth of the same colour. There is likewise a species of this disease called the Black Jaundice.

CAUSES.———The immediate cause of the jaundice is an obstruction of the bile. The remote or occasional causes are, the bites of poisonous animals, as the viper, mad dog, &c.; the bilious or hysteric colic; violent passions, as grief, anger, &c. Strong purges or vomits will likewise occasion the jaundice. Sometimes it proceeds from obstinate agues, or from that disease being prematurely stopped by astringent medicines. In infants it is often occasioned by the MECONIUM not being sufficiently purged off. Pregnant women are very subject to it. It is likewise a symptom in several kinds of fever. Catching cold, or the stoppage of customary evacuations, as the MENSES, the bleeding piles, issues, &c. will occasion the jaundice.

SYMPTOMS.---- The patient at first complains of excessive weariness, and has a great aversion to every kind of motion. His skin is dry, and he generally feels a kind of itching or pricking pain over the whole body. The stools are of a whitish or clay colour, and the urine, as was observed above, is yellow. The breathing is difficult, and the patient complains of an unusual load or oppression on his breast. There is heat in his nostrils, a bitter taste in the mouth, loathing of food, sickness of the stomach, vomiting, flatulency, and other symptoms of indigestion.

If the patient be young, and the disease complicated with no other malady, it is seldom dangerous; but in old people, where it continues long, returns frequently, or is complicated with the dropsy or hypochondriac symptoms, it generally proves fatal. The black jaundice is more dangerous than the yellow.

REGIMEN.-----The diet should be cool, light, and diluting, consisting chiefly of ripe fruits and mild vegetables; as apples boiled or roasted, stewed prunes, preserved plums, boiled spinage, &c. Veal or chicken-broth, with light bread, are likewise very proper. Many have been cured by living almost wholly for some days on raw eggs. The drink should be butter-milk, whey sweetened with honey, or decoctions of cool opening vegetables; or marsh-mallow roots, with liquorice, &c.

The patient should take as much exercise as he can bear, either on horseback or in a carriage; walking, running, and even jumping, are likewise proper, provided he can bear them without pain, and there be no symptoms of inflammation. Patients have often been cured of this disease by a long journey, after medicines had proved ineffectual.

Amusements are likewise of great use in the jaundice. The disease is often occasioned by a sedentary life, joined to a dull melancholy dis

position. Whatever therefore tends to promote the circulation, and to cheer the spirits, must have a good effect; as dancing, laughing, singing, &c.

MEDICINE. ——If the patient be young, of a full sanguine habit and complains of pain in the right side about the region of the liver, bleeding will be necessary. After this a vomit must be administered, and, if the disease proves obstinate, it may be repeated once or twice. No medicines are more beneficial in the jaundice than vomits, especially where it is not attended with inflammation. Half a drachm of ipecacuanha in powder will be a sufficient dose for an adult. It may be wrought off with weak camomile-tea or lukewarm water. The body must likewise be kept open by taking a sufficient quantity of Castile soap, or the pills for the jaundice recommended in the Appendix.

Fomenting the parts about the region of the stomach and liver, and rubbing them with a warm hand or flesh-brush, are likewise beneficial; but it is still more so for the patient to sit in a bath of warm water up to the breast. He ought to do this frequently, and should continue in it as long as his strength will permit.

Many dirty things are recommended for the cure of the jaundice; as lice, millepedes, &c. But these do more harm than good, as people trust to them, and neglect more valuable medicines; besides, they are seldom taken in sufficient quantity to produce any effects. People always expect that such things should act as charms, and consequently seldom persist in the use of them. Vomits, purges, fomentations, and exercise, will seldom fail to cure the jaundice when it is a simple disease; and when complicated with the dropsy, a schirrous liver, or other chronic complaints, it is hardly to be cured by any means.

Numberless British herbs are extolled for the cure of this disease. The author of the MEDICINA BRITANNICA mentions near a hundred, all famous for curing the jaundice. The fact is, the disease often goes off of its own accord; in which case the last medicine is always said to have performed the cure. I have sometimes however seen considerable benefit, in a very obstinate jaundice, from a decoction of hempseed. Four ounces of the seed may be boiled in two English quarts of ale, and sweetened with coarse sugar. The dose is half an English pint every morning. It may be continued for eight or nine days.

I have likewise known Harrogate sulpher water cure a jaundice of very long standing. It should be used for some weeks, and the patient must both drink and bathe.

The soluble tartar (i. e. tartarized kali) is a very proper medicine in the jaundice. A drachm of it may be taken every night and morning in a cup of tea or water gruel. If it does not open the body, the dose may be increased.

Persons subject to the jaundice ought to take as much exercise as possible, and to avoid all heating and astringent aliments

CHAP. XXXVII.

OF THE DROPSY.

THE dropsy is a preternatural swelling of the whole body, or some part of it, occasioned by a collection of watery humour. It is distinguished by different names according to the part affected, as the anasarca, or a collection of water under the skin; the ascites, or a collection of water in the belly; the hydrops pectoris, or dropsy of the breast; the hydrocephalus, or dropsy of the brain, &c.

CAUSES.------The dropsy is often owing to an hereditary disposition. It may likewise proceed from drinking ardent spirits, or other strong liquors. It is true, almost to a proverb, that great drinkers die of a dropsy. The want of exercise is also a very common cause of the dropsy. Hence it is justly reckoned among the diseases of the sedentary. It often proceeds from excessive evacuations, as frequent and copious bleedings, strong purges often repeated, frequent salivations, &c. The sudden stoppage of customary or necessary evacuations, as the menses, the hæmorrhoids, fluxes of the belly, &c. may likewise cause the dropsy.

I have known the dropsy occasioned by drinking large quantities of cold, weak, watery liquor, when the body was heated by violent exercise. A low, damp, or marshy situation is likewise a frequent cause of it. Hence it is a common disease in moist, flat, fenny countries. It may also be brought on by a long use of poor watery diet, or of viscious aliment that his hard of digestion. It is often the effect of other diseases, as the jaundice, a scirrhus of the liver, a violent ague of long continuance, a diarrhœa. a dysentery, an empyema, or a consumption of the lungs. In short, whatever obstructs the perspiration, or prevents the blood from being duly prepared, may occasion a dropsy.

SYMPTOMS.——The anasarca generally begins with a swelling of the feet and ancles towards night, which for some time disappears in the morning. In the evening the parts, if pressed with the finger, will pit. The swelling gradually ascends and occupies the trunk of the body, the arms, and the head. Afterwards the breathing becomes difficult, the urine is in small quantity, and the thirst great, the body is bound, and the perspiration is greatly obstructed. To these succeed torpor, heaviness, a slow wasting fever, and a troublesome cough. This last is generally a fatal symptom, as it shews that the lungs are affected.

In an ascites, besides the above symptom, there is a swelling of the belly, and often a fluctuation, which may be perceived by striking the belly on one side, and laying the palm of the hand on the opposite. This may be distinguished from a tympany by the weight of the swelling, as well as by the fluctuation. When the anasarca and ascites are combined, the case is very dangerous. Even a simple ascites seldom admits of a radical cure. Almost all that can be done is, to let off the water by tapping, which seldom affords more than a temporary elief.

When the disease comes suddenly on, and the patient is young and strong, there is reason however to hope for a cure, especially if medicine be given early. But if the patient be old, has led an irregular or a sedentary life, or if there be reason to suspect that the liver, lungs, or any of the viscera, are unsound, there is great reason to fear that the consequences will prove fatal.

REGIMEN.——The patient must abstain, as much as possible, from all drink, especially weak and watery liquors, and must quench his thirst with mustard-whey, or acids, as juice of lemons, oranges, sorrel, or such like. His aliment ought to be dry, of a stimulating and diuretic quality, as toasted bread, the flesh of birds, or other wild animals roasted; pungent and aromatic vegetables, as garlic, mustard, onions, cresses, horse-radish, rocambole, shalot, &c. He may also eat sea-biscuit dipped in wine or a little brandy. This is not only nourishing, but tends to quench thirst. Some have been actually cured of a dropsy by a total abstinence from all liquids, and living entirely upon such things as are mentioned above. If the patient must have drink, the Spa-water, or Rhenish-wine, with diuretic medicines infused in it, are the best.

Exercise is of the greatest importance in a dropsy. If the patient be able to walk, dig, or the like, he ought to continue these exercises as long as he can. If he is not able to walk or labour, he must ride on horseback, or in a carriage, and the more violent the motion so much the better, provided he can bear it. His bed ought to be hard, and the air of his apartments warm and dry. If he lives in a damp country, he ought to be removed into a dry one, and, if possible, into a warmer climate. In a word, every method should be taken to promote the perspiration and to brace the solids. For this purpose it will likewise be proper to rub the patient's body, two or three times a day, with a hard cloth, or the flesh-brush; and he ought constantly to wear flannel next his skin.

MEDICINE.------If the patient be young, his constitution good, and the disease has come on suddenly, it may generally be removed by strong vomits, brisk purges, and such medicines as promote a discharge by sweat and urine. For an adult, half a drachm of ipecacuanha in powder, and half an ounce of oxymel of squills, will be a proper vomit. This may be repeated as often as is found necessary, three or four days intervening between the doses. The patient must not drink much after taking the vomit, otherwise he destroys its effect. A cup or two of camomile-tea will be sufficient to work it off.

Between each vomit, on one of the intermediate days, the patient may take the following purge: Jalap in powder half a drachm, cream of tarter two drachms, calomel six grains. These may be made into a bolus with a little syrup of pale roses, and taken early in the morning. The less the patient drinks after it the better. If he be much griped, he may now and then take a cup of chicken-broth.

The patient may likewise take every night at bed-time the following bolus: to four or five grains of camphor add one grain of opium, and as much syrup of orange-peel as is sufficient to make them into a bolus. This will generally promote a gentle sweat, which should be encouraged by drinking now and then a small cup of wine-whey, with a tea-spoonful of the spirits of hartshorn in it. A tea-cupful of the following diuretic infusion may likewise be taken every four or five hours through the day.

Take juniper-berries, mustard-seed, and horse-radish, of each half

an ounce, ashes of broom half a pound; infuse them in a quart of Rhenish wine or strong ale for a few days, and afterwards strain off the liquor. Such as cannot take this infusion, may use the decoction of seneka-root, which is both diuretic and sudorific. An obstinate ANASARCA has been cured by an infusion of the ashes of broom in wine.

The above course will often cure an incidental dropsy, if the constitution be good; but when the disease proceeds from a bad habit, or an unsound state of the viscera, strong purges and vomits are not to be ventured upon. In this case, the safer course is to palliate the symptoms by the use of such medicines as promote the secretions, and to support the patient's strength by warm and nourishing cordials.

The secretion of urine may be greatly promoted by nitre. Brookes says, he knew a young woman who was cured of a dropsy by taking a drachm of nitre every morning in a draught of ale, after she had been given over as incurable. The powder of squills is likewise a good diuretic. Six or eight grains of it, with a scruple of nitre, may be given twice a-day in a glass of strong cinnamon-water. Ball says, a large spoonful of unbruised mustard-seed taken every night and morning, and drinking half an English pint of the decoction of the tops of green broom after it, has performed a cure after other powerful medicines had proved ineffectual.

I have sometimes seen good effects from cream of tartar in this disease. It promotes the discharges by stool and urine, and will at least palliate, it it does not perform a cure. The patient may begin by taking an ounce every second or third day, and may increase the quantity to two or even to three ounces, if the stomach will bear it. This quantity is not however to be taken at once, but divided into three or four doses.

To promote perspiration, the patient may use the COMPOUND POWDER OF IPECACUANHA, or the decoction of seneka-root, as directed above; or he may take two table-spoonfuls of ACETATED WATER OF AMMONIA (Mindererus's spirit) in a cup of wine-whey three or four times a-day, To promote a discharge of urine, the following infusion of the London hospitals will likewise be beneficial:

Take of zedoary-root two drachms; dried squills, rhubarb, and juniper-berries bruised, of each a drachm; cinnamon in powder, three drachms; PREPARED KALI, or salt of tartar, a drachm and a half; infuse in an English pint and a half of old hock-wine, and, when fit for use, filter the liquor. A wine-glass of it may be taken three or four times a-day.

In the anasarca it is usual to scarify the feet and legs. By this means the water is often discharged: but the operator must be cautious not to make the incisions too deep; they ought barely to pierce through the skin, and especial care must be tsken, by spirituous fomentations and proper digestives, to prevent a gangrene. A diarrhœa spontaneously appearing in a dropsy of long continuance is generally fatal.

In an ascites, when the disease does not evidently and speedily give way to purgative and diuretic medicines, the water ought to be let off by tapping. This is a very simple and safe operation, and would often succeed, if it were performed in due time; but if it be delayed till the humours are vitiated, or the bowels spoiled, by long soaking in water, it can hardly be expected that any permanent relief will be procured.

After the avacuation of the water, the patient is to be put on a course of strengthening medcines ; as the Peruvian bark ; the elixir of vitriol: warm aromatics, with a due proportion of rhubarb, infused in wine, and such like. His diet ought to be dry and nourishing, such as is recommended in the beginning of the Chapter ; and he should take as much exercise as he can bear without fatigue. He shonld wear flannel, or rather fleecy hosiery, next his skin, and make daily use of the flesh-brush.

Few persons can take such a large quantity as two or three ounces of cream of tarter, as is above recommended : we prefer beginning with half an ounce dissolved in ten ounces of boiling water, in which a few sprigs of mint may be infused ; this quantity of the crystals of tarter may be gradually increased to one ounce or an ounce and a half dissolved in a pint of boiling water, to which three or four table-spoonfuls of gin, or the compound spirits of junipter, may be added, and the whole may be taken in the course of a day. This medicine has been given with much success by the late ingenious Dr. Lake, physician to the Westminster Lying-in Hospital, and by the learned Dr. Ferriar of Manchester ; the latter sometimes gave half a drachm of the dried powder of goldon-rod, which was anciently of great fame in dropsical and nephritic disorders. It acts as a gentle purgative, but does not prove very diuretic.

Fox-glove, by increasing the discharge of the kidneys having in a great number of instances effected a cure of dropsical affections, we shall insert the formula for taking it in the Appendix : but so dangerous and deleterious a drug ought not to be exhibited without the greatest caution, otherwise incessant vomiting and purging may destroy the patient, Garlic, onions, leeks, mustard, and horse-radish, may be freely used in this disease.

CHAP. XXXVIII.

OF THE GOUT.

THERE is no disease which shews the imperfection of medicine, or sets the advantages of temperance and exercise in a stronger light, than the gout. Excess and idleness are the true sources from whence it originally sprung, and all who would avoid it must be ACTIVE and TEMPERATE.

Though idleness and intemperance are the principal causes of the gout, yet many other things may contribute to bring on the disorder in those who are not, and to induce a paroxysm in those who are subject to it ; as intense study ; too free a use of acidulated liquors ; night watching ; grief or uneasiness of mind ; and obstruction or defect of any of the customary discharges, as the menses, sweating of the feet, perspiration, &c.

SYMPTOMS.——A fit of the gout is generally preceded by indi-

gestion, drowsiness, belching of wind, a slight head-ach, sickness, and sometimes vomiting. The patient camplains of weariness and dejection of spirits, and as often a pain in the limbs, with a sensation as if wind or cold water were passing down the thigh. The appetite is often remarkably keen a day or two before the fit, and there is a slight pain in passing urine, and frequently an involuntary shedding of tears. Sometimes these symptoms are much more violent, especially upon the near approach of the fit; and it has been observed that as is the fever which ushers in the gout, so will the fit be: if the fever be short and sharp, the fit will be so likewise; if it be feeble, long, and lingering, the fit will be such also. But this observation can only hold with respect to very regular fits of the gout.

The regular gout generally makes its attack in the spring or beginning of winter in the following manner: About two or three in the morning, the patient is seized with a pain in his great toe, sometimes in the heel, and at other times in the ancle or calf of the leg. This pain is accompained with a sensation as if cold water were poured upon the part, which is succeeded by a shivering, with some degree of fever. Afterwards the pain increases, and, fixing among the small bones of the foot, the patient feels all the different kinds of torture, as if the part were stretched, burnt, squeezed gnawed, or torn in pieces. The part at length becomes so exquisitely sensible, that the patient cannot bear to have it touched, or even suffer any person to walk across the room.

The patient is generally in exquisite torture for twenty-four hours from the time of the coming on of the fit: he then becomes easier, the part begins to swell, appears red, and is covered with a little moisture. Towards morning he drops asleep, and generally falls into a gentle breathing sweat. This terminates the first paroxysm, a number of which constitutes a fit of the gout; which is longer or shorter according to the patient's age, strength, the season of the year, and the disposition of the body to this disease.

The patient is always worse towards, night and easier in the morning. The paroxysms however generally grow milder every day, till at length the disease is carried off by perspiration, urine, and the other avacuations. In some patients this happens in a few days; in others, it requires weeks, and in some months, to finish the fit. Those whom age and frequent fits of the gout have greatly debilitated, seldom get free from it before the approach of summer, and sometimes not till it be pretty far advanced.

REGIMEN.——As there are no medicines yet known that will cure the gout, we shall confine our observations chiefly to regimen, both in and out of the fit.

In the fit, if the patient be young and strong, his diet ought to be thin and cooling, and his drink of a diluting nature; but where the constitution is weak, and the patient has been accustomed to live high, this is not a proper time to retrench. In this case he must keep nearly to his usual diet, and should take frequently a cup of strong negus, or a glass of generous wine. Wine-whey is a very proper drink in this case, as it promotes the perspiration without greatly heating the patient. It will answer this purpose better if a teaspoonful of VOLATILE LIQUOR OF HARTSHORN be put into a cup of it twice a-day. It will likewise be proper to give at bed time a teaspoonful of the volatile tincture of GUAIACUM in a large draught of

warm wine-whey. This will greatly promote perspiration through the night.

As the most safe and efficacious method of discharging the gouty matter is by perspiration, this ought to be kept up by all means, especially in the affected part. For this purpose the leg and foot should be wrapt in soft flannel, fur, or wool. The last is most readily obtained, and seems to answer the purpose better than any thing else. The people of Lancashire look upon wool as a kind of specific in the gout. They wrap a great quantity of it about the leg and foot affected, and cover it with a skin of soft dressed leather. This they suffer to continue for eigh or ten days, and sometimes for a fortnight or three weeks, or longer, if the pain does not cease. I never knew any external application answer so well in the gout. I have often seen it applied when the swelling and inflammation were very great, with violent pain, and have found all these symptoms relieved by it in a few days. The wool which they use is generally greased, and carded or combed. They choose the softest which can be had and seldom or ever remove it till the fit be entirely gone off. The ingenious Mr. Parkinson recommends relaxing the skin, by wrapping the limb in light wool which has been previously moistened suspending it over the steam of boiling water: over the wool the patient may wear an oil-skin bootikin, which by confining the vapour, will excite a copious perspiration from the exhalants. This practice may be adopted not only with safety but advantage at any period of life.

The patient oupht likwise to be kept quiet and easy during the fit. Every thing that affects the mind disturbs the paroxysm, and tends fo throw the gout upon the nobler parts. All external applications that repel the matter are to be avoided as death. They do not cure the disease, but remove it from a safer to a more dangerous part of the body, where it often proves fatal. A fit of the gout is to be considered as Nature's method of removing something that might prove destructive to the body; and all that we can do with safety, is to promote her intentions, and to assist her in expelling the enemy in her own way. Evacuations by bleeding, stool, &c. are likewise to be used with caution; they do not remove the cause of the disease, and sometimes by weakening the patient prolong the fit: but where the constitution is able to bear it, it will be of use to keep the body gently open by diet, or very mild laxative medicine.

Many things will indeed shorten a fit of the gout, and some will drive it off altogether; but nothing has yet been found which will do this with safety to the patient. In vain we eagerly grasp at any thing that promises immediate ease, and even hazard life itself for a temporary relief. This is the true reason why so may infallible remedies have been proposed for the gout, and why such numbers have lost their lives by the use of them. It would be as prudent to stop the small-pox from rising, and to drive them into the blood, as to attempt to repel the gouty matter after it has been thrown upon the extremities. The latter is as much an effort of Nature to free herself from an offending cause as the former, and ought equally to be promoted.

If the patient be young and of a plethoric habit, when the pain is very violent the application of leeches to the inflamed parts will be advisible; and if the patient is restless, thirty or forty drops of laudanum, more or less according to the violence of the symptoms,

may be taken at bed-time. This will ease the pain, procure rest, promote perspiration, and forward the crisis of the disease.

After the fit is over, the patient ought to take a gentle dose or two of the bitter tincture of rhubarb, or some other warm stomachic purge. He should also drink a weak infusion of stomachic bitters in small wine or ale, as the Peruvian bark, with cinnamon, Virginian snake-root, and orange-peel. The diet at this time should be light, but nourishing, and gentle exercise ought to be taken on horseback or in a carriage.

During the absence of the fit, it is in the patient's power to do many things towards preventing a return of the disorder, or rendering the fit, if it should return, less severe. This however is not to be attempted by medicine. I have frequently known the gout kept off for several years by the Peruvian bark and other astringent medicines; but in all the cases where I had occasion to see this tried, the persons died suddenly, and to all appearance for want of a regular fit of the gout. One would be apt, from hence, to conclude that a fit of the gout, to some constitutions, in the decline of life, is rather salutary than hurtful.

Though it may be dangerous to stop a fit of the gout by medicine, yet, if the constitution can be so changed by diet and exercise as to lessen or totally prevent its return, there certainly can be no danger in following such a course. It is well known that the whole habit may be so altered by a proper regimen, as quite to eradicate this disease; and those only who have sufficient resolution to persist in such a course have reason to expect a cure.

The course which we would recommend for preventing the gout is as follows: In the first place, UNIVERSAL TEMPERANCE. In the next place, SUFFICIENT EXERCISE. By this we do not mean sauntering about in an indolent manner, but labour, sweat, and toil: these only can render the humours wholesome, and keep them so. Going early to bed, and rising betimes, are also of great importance. It is likewise proper to avoid night studies and intense thinking. The supper should be light, and taken early. All strong liquors, especially generous wines, sour punch, and pickles, are to be avoided.

Celsus strongly recommends muscular exercise; and whoever will submit to it in the fullest extent, may expect to reap solid and permanent advantages.

We would likewise recommend some doses of magnesia alba and rhubarb to be taken every spring and autumn; and afterwards a course of stomachic bitters, as tansy or water-trefoil tea, an infusion of gentian and camomile-flowers, or a decoction of burdock-root,&c. Any of these, or an infusion of any wholesome bitter that is more agreeable to the patient, may be drank for two or three weeks in March and October twice a-day. An issue or perpetual blisters has a great tendency to prevent the gout. If these were more generally used in the decline of life, they would not only often prevent the gout, but also other chronic maladies. Such as can afford to go to Bath, will find great benefit from bathing and drinking the water. It both promotes digestion, and invigorates the habit.

Though there is little room for medicine during a regular fit of the gout, yet when it leaves the extremities, and falls on some of the internal parts, proper applications to recal and fix it become absolutely necessary. When the gout affects the head, the pain of the

joint ceases, and the swelling disappears, while either severe head-ach, drowsiness, trembling, giddiness, convulsions or delirium come on. When it seizes the lungs, great oppression, with cough and difficulty of breathing, ensue. If it attacks the stomach, extreme sickness, vomiting, anxiety, pain in the epigastric region, and total loss of strength, will succeed.

When the gout attacks the head or lungs, every method must be taken to fix it in the feet. They must be frequently bathed in warm water, and acrid cataplasms applied to the soles. Blistering-plasters ought likewise to be applied to the ankles, or calves of the legs. Bleeding in the feet or ankles is also necessary, and warm stomachic purges. The patient ought to keep in bed for the most part, if there be any signs of inflammation, and should be very careful not to catch cold.

If it attack the stomach with a sense of cold, the most warm cordials are necessary; as strong wine boiled up with cinnamon or other spices; cinnamon-water; peppermint-water; and even brandy or rum: sometimes æther is found to be an efficacious remedy in this case. The patient should keep his bed, and endeavour to promote a sweat by drinking warm liquors; and if he should be troubled with a nausea, or inclination to vomit, he may drink camomile-tea, or any thing that will make him vomit freely.

When the gout attacks the kidneys, and imitates gravel pains, the patient ought to drink freely of a decoction of marsh-mallows, and to have the parts fomented with warm water. An emollient clyster ought likewise to be given, and afterwards an opiate. If the pain be very violent, twenty or thirty drops of TINCTURE OF OPIUM may be taken in a cup of the decoction.

Persons who have had the gout should be very attentive to any complaints that may happen to them about the time when they have reason to expect a return of the fit. The gout imitates many other disorders, and by being mistaken for them, and treated improperly, is often diverted from its regular course, to the great danger of the patient's life.

Those who never had the gout, but who, from their constitution or manner of living, have reason to expect it, ought likewise to be very circumspect with regard to its first approach. If the disease, by wrong conduct or improper medicines, be diverted from its proper course, the miserable patient has a chance to be ever after tormented with head-achs, coughs, pains of the stomach and intestines, and to fall at last a victim to its attack upon some of the more noble parts.

The observations of the late Dr. Hamilton, of Lynn, on the cause and treatment of gout, the means he recommends of mitigating the severe inflammatory pain, lessening the duration of the paroxysms, and preventing the rigidity and distressing lameness which remain in many arthritic patients in the intervals of the fits, are valuable and important: being the result of many years personal experience, we presume they cannot fail to be acceptable to our readers. From the most accurate investigation of the gout in his own person, it appeared evidently to him that the attack was accompanied with symptoms of a highly inflammatory distemper, and, during the commencement of the paroxysm, was as much so as pleurify, peripneumony, acute rheumatism, or any other phlogistic disease; resembling the acute

rheumatism more than any other. He had intense pain, great heat violent inflammation, fever, and strong, full pulse. To lessen the impetus of the blood, to abate the general tension and inflammation, and to restore the freedom of circulation, Dr. H. took calomel with opium, with the occasional addition of TARTARIZED ANTIMONY and camphire, as circumstances pointed out; and he had recourse to blood-letting in a quantity proportioned to the degree of inflammation and state of the pulse, and always with great relief. The Doctor declares that he never felt any thing like a retrocession of the gout after it.

While the disease remained in the inflammatory stage, this skilful physician took cooling cathartics (as VITRIOLATED MAGNESIA, or VITRIOLATED NATRON, &c. with nitre); and in the decline of the paroxysm, he took warmer eccoprotics, as wine of aloes, not only with safety but considerable advantage.

Medical writers recommend the application of blisters and sinapisms to the extremities when the gout seizes the head, chest, stomach, &c. with a view to make a revulsion from the parts affected. Dr. H., having repeatedly seen the application of blisters attended in those distressing cases with the most happy consequences; observing that, in proportion as an inflammation was excited on the skin by the blister, the pain and other symptoms abated; and as the blister rose and the pain increased they went gradually off; therefore applied PLASTERS OF CANTHARIDES to his feet, on the inside near the ankle; on and near the knees whenever those parts were attacked. The benefit he received from them greatly overbalanced the temporary pain they occasioned. If the blisters were applied over night, the intenseness of the pain and inflammation was gone in the morning, and, as the blisters discharged, entirely went off. As the blisters that were first applied dried up, during the whole fit several others were repeatedly applied. So great was the relief he received from them, that as soon as the pain begun to be intense, with the concomitant inflammation, he directly had recourse to his certain friends the blisters; this was the practice of Dr. H, in his own case, upwards of eighteen years.

If the foot and knee were affected at the same time, he placed the blister above the ankle, on the inside of the leg, on the part where they are generally put in fevers; this place he found more eligible than any other, being fully efficacious in relieving both the foot and the knee. After the blisters discharged two days, there was something like pus appeared upon their site; then it is that the smell peculiar to the gout takes place in the discharge from them, which the gouty effluvia from the spontaneous discharge of sweat from the feet so strongly exhibits on the decline of a paroxysm. The inflammation and pain on the blisters abovementioned, and the peculiar smell of their discharge, seem sufficient demonstrations that a great part of the gout is translated from the joints to the blisters, and is there discharged; and are evidences that the disease depends upon fluid matter, SUI GENERIS, which here finds an artificial outlet. Besides the relief from pain and abatement of inflammation afforded by the discharge of the blisters, this discharge is attended with another great advantage; the abatement of tumour occasioned by the infiltration of a serum, or other watery parts of the blood, into the cellular membrane of the diseased part; the absorption of this fluid is cer-

tainly promoted by blisters, and great part at the vesicated surface. Another important advantage is obvious : viz. the great accumulation from this extravasation about the joints is prevented, and that stiffness from the inspissated stagnated fluid about the ligaments, &c. in a great measure removed ; at least he found it so in himself, his joints being perfectly free in their motions when he was clear of the paroxysm. May we not infer from this, that a discharge thus procured of the stagnant fluid in the cellular membrane may be in some degree the means of preventing chalky concretions ?

Dr. Hamilton is decidedly averse to the application of much external heat in the gout, and even to wrapping the parts thickly in fleecy hosiery, or warm flannel ; on the contrary, in all cases of gout, we deem it necessary to keep the surface of the body warm, but more especially the lower extremities, so as to keep up the discharge by the skin. He says acids are not injurious, as is commonly imagined ; he always freely used them in his own case.

Dr. H. condemns the practice of giving strong spiritous remedies when the gout attack the stomach, because he thinks the disease of an equally inflammatory nature wherever situated. But the affection of the stomach so frequenlty experienced by gouty patients appears to be rather of a spasmodic than an inflammatory nature, and therefore to indicate the use of antispasmodic remedies. Eperience, at least, it has been judiciously observed, seems to have decided of their utility in such cases.

When the gout attacks the head or lungs, the aid of a skilful physician ought if possible to be obtained ; blood must be immediately taken away, if the state of the pulse and the strength of the patient will permit. If the disease attacks the head, apply a large blister to it : if the attack is on the internal parts, and is attended with vomiting, give half a grain to a grain of ipecacuanha every ten or fifteen minutes, foment the chest with a decoction of camomile-flowers, and rub the parts affected with a mixture of equal parts of the COMPOUND SOAP LINIMENT, commonly called OPODELDOC, and VITRIOLIC ETHER ; immerse the feet in warm water ; apply sinapisms of oatmeal and bruised garlic, or cataplasms of rye-meal and flour of mustard, to the soles. As soon as the convulsive motions of the stomach subside, give a tea-spoonful or two of vitriolic either in two table-spoonfuls of the CAMPHORATED MIXTURE, to which may be added tincture of opium and tartarized wine of antimony ten to twenty drops or more: to be given directly, and repeated every two, three, or four hours, or oftener, according to the exigency of the case. The cuticular discharge may also be promoted and the intestines cleansed by POWDER OF ALOES WITH GUAIACUM ten to twenty grains, antimonial powder three grains to five, mix and form ; two to four pills is be taken at bed-time.

As soon as the abatement of the paroxysm will permit, air, friction by flannel or a flesh brush, muscular exercise, and sea-bathing, cannot be too strongly recommended, as the best means of restoring the strength and of preventing rigidity and thickening of the joints. Much benefit may be derived from drinks impregnated with carbonic acid gas ; i. e. water impregnated with fixed air. From one to four or six drachms of powdered ginger boiled in cow's milk have lately been found an excellent preventive. Absorbent powders, consisting of calcined magnesia two scruples, purified kali and powdered rhu-

barb of each three to five grains, have likewise been taken every other morning for several weeks with considerable advantage. These, with total abstinence from spiritous liquors, wine, animal food: regular hours, and keeping the feet warm; have restored many helpless and miserable patients to active and comfortable life.

The ingenious Mr. Parkinson recommends occasional doses of prepared natron, with a view of destroying acidity in the stomach, which he considers a principal cause of gout.

An intelligent country physician has lately published a dissertation on this deplorable disease: he asserts—"that gout differs in no essential circumstance from common inflammation; that it is not a constitutional, but merely a local affection; that its genuine seat is exclusively in the ligamentous and tendinous structure;—consisting of active inflammation, assuming every diversity which constitutional and temperamental conditions of life and health may impart to it;—and that, if seasonably and appropriately treated, it is as easily remediable as inflammatory excitement on the muscular, cuticular, or any other description of organic texture." As cold water is an useful application to burns and scalds, instead of combating this formidable and ever-varying malady with alteratives, anodynes, bleeding, blisters and diaphoretics, he says, as the disease is caused by the accumulation of heat, the obvious way of removing it is by the application of the cold. This practice is not new, but we trust it will continue to be rare. The illustrious Dr. Harvey, who elucidated the circulation of blood, lived to complete his seventy-ninth year; yet that elegant and accurate writer, Dr. Aikin, says, that "it is related that, in his paroxysms of the gout, he could not be prevented from plunging the affected joint in cold water.

A few years ago we knew a person who frequently had fits of an hereditary gout: in the thirty-seventh year of his age, he was attacked with the usual symptoms of arthritic inflammation in his feet, and he immersed them in cold water. This experiment shortened the paroxysm, by putting a period to his life!

Linnæus, whose labours created him a name—"NEVER TO DIE," derived great relief in a severe attack of the gout by eating freely of strawberries: persevering in the use of this fruit every succeeding summer the recurrance of the disease became less violent, and at length never returned. Two cases however are mentioned by the late Dr. Pulteney, shewing that, wholesome as strawberries are universally considered, they will notwithstanding act as a POISON on some persons; occasioning SYNCOPE, succeeded by petechial efflorescence on the shin.

OF THE RHEUMATISM.

THIS disease has often a resemblance to the gout. It generally attacks the joints with exquisite pain, and is sometimes attended with inflammation and swelling. It is most common in the spring and towards the end of autumn. It is usually distinguished into acute and chronic; or the rheumatism with and without a fever.

CAUSES.——The causes of a rheumatism are frequently the same as those of an inflammatory fever, viz. an obstructed perspiration, the immoderate use of strong liquors, and the like. Sudden changes of

the weather, and all quick transitions from heat to cold, are very apt to occasion the rheumatism. The most extraordinary case of a rheumatism that I ever saw, where almost every joint of the body was distored, was a man who used to work one part of the day by the fire, and the other part of it in the water. Very obstinate rheumatisms have likewise been brought on by persons not accustomed to it allowing their feet to continue long wet. The same effects are often produced by wet cloaths, damp beds, sitting or lying on the damp ground, travelling in the night, &c.

The rheumatism may likewise be occasioned by excessive evacuations, or the stoppage of customary discharges, It is often the effect of chronic diseases which vitiate the humours; as the scurvy, the lues venera, obstinate autumnal agues, &c.

The rheumatism prevails in cold, damp, marshy countries. It is most common among the poorer sort of peasants, who are ill cloathed, live in low damp houses, and eat coarse and unwholesome food which contains but little nourishment, and is not easily digested.

SYMPTOMS.——The acute rheumatism commonly begins with weariness. shivering, a quick pulse, restlessness, thirst and other symptoms of fever. Afterwards the patient complains of flying pains, which are increased by the least motion. These at length fix in the joints, which are often affected with swelling and inflammation. If blood be let in this disease, it has generally the same appearance as in the pleurisy.

In this kind of rheumatism the treatment of the patient is nearly he same as in an acute or inflammatory fever. If he be young and trong, bleeding is necessary, which may be repeated according to the exigencies of the case. The body ought likewise to be kept open by emollient clysters, or cool opening liquors; as decoctions of tamarinds, cream of tarter, whey, senna-tea, and the like. The diet should be light, and in small quantity, consisting chiefly of roasted apples, groat-gruel, or weak chicken broth. After the feverish symptoms have abated, if the pain still continues, the patient must keep his bed, and take such things as promote perspiration; as wine-whey, with SPIRITUS MINDERERI (i. e. water of acetated ammonia). He may likewise take, for a few nights. at bed-time, in a cup of wine-whey, a drachm of cream of tarter, and a half a drachm of gum guaiacum in powder.

Warm bathing, after proper evacuations, has often an exceeding good effect. The patient may either be put into a bath of warm water, or have cloaths wrung out of it applied to the parts affected. Great care must be taken that he do not catch cold after bathing.

The CHRONIC rheumatism is seldom attended with any considerable degree of fever, and is generally confined to some particular part of the body, as the shoulders the back, or the loins. There is seldom any inflammation or swelling in this case. Persons in the decline of life are most subject to the chronic rheumatism. In such patients it often proves extremely obstinate, and sometimes incurable.

In this kind of rheumatism the regimen should be nearly the same as in the acute. Cool and diluting diet, consisting chiefly of vegetable substances, as stewed prunes coddled apples, currants, or gooseberries boiled in milk, is most proper. Arbuthnot says, "If there be

a specific in aliment for the rheumatism, it is certainly whey;" and adds, "that he knew a person subject to this disease, who could never be cured by any other method but a diet of whey and bread." He likewise says, "That cream of tarter in water-gruel, taken for several days, will ease rheumatic pains considerably." This I have often experienced, but found it always more efficacious when joined with gum guaiacum, as already directed. In this case the patient may take the dose formerly mentioned twice a-day, and likewise a teaspoonful of the volatile tincture of gum guaiacum, at bed-time, in wine-whey.

This course may be continued for a week, or longer if the case proves obstinate, and the patient's strength will permit. It ought then to be omitted for a few days and repeated again. At the same time leeches or a blistering plaster may be applied to the part affected. What I have generally found answer better than either of these, in obstinate fixed rheumatic pains, is the WARM PLASTER (see Appendix). I have likewise known a plaster of Burgundy pitch worn for some time on the part affected give great relief in rheumatic pains. My ingenious friend, Dr. Alexander of Edinburgh, says he has frequently cured very obstinate rheumatic pains by rubbing the parts affected with tincture of cantharides. When the common tincture did not succeed, he used it of a double or treble strength. Cupping upon the part affected is likewise often very beneficial, and so is the application of leeches.

Though this disease may not seem to yield to medicines for some time, yet they ought still to be persisted in. Persons who are subject to frequent returns of the rheumatism, will often find their account in using medicines, whether they be immediately affected with the disease or not. The chronic rheumatism is simular to the gout in this respect, that the most proper time for using medicines to extirpate it is when the patient is most free from the disorder.

Some arthritic and rheumatic affections give way to tar-water, persisted in for some time; considerable benefit may also be derived by taking the alterative pill mentioned in the Appendix.

To those who can afford the expence, I would recommend the warm baths of Buxton or Matlock in Derbyshire. These have often, to my knowledge, cured very obstinate rheumatisms and are always safe either in or out of the fit. When the rheumatism is complicated with scorbutic complaints, which is not seldom the case, the Harrogate waters, and those of Mossat, are proper. They should both be drank and used as a warm bath.

There are several of our own domestic plants which may be used with advantage in the rheumatism. One of the best is the white mustard. A table-spoonful of the seed of this plant may be taken twice or thrice a-day in a glass of water or small wine. The water-trefoil is likewise of great use in this complaint. It may be infused in wine or ale, or drank in form of tea. The ground-ivy, camomile, and several other bitters, are also beneficial, and may be used in the same manner. No benefit however is to be expected from these, unless they be taken for a considerable time. Excellent medicines are often despised in this disease, because they do not perform an immediate cure; whereas nothing would be more certain than their effect, were they duly persisted in. Want of perseverance in the use

of medicines is one reason why chronic diseases are sildom cured.

Cold bathing, especially in salt water, often cures the rheumatism. We would also recommend exercise and wearing flannel next the skin. Issues are likewise very proper, especially in chronic cases. If the pain affects the shoulders, an issue may be made in the arm; but if it affects the loins, it should be put into the leg or thigh.

Persons afflicted with the scurvy are very subject to rheumatic complaints. The best medicines in this case are bitters and mild purgatives. These may either be taken separately or together, as the patient inclines. An ounce of CINCHONA (Peruvian bark,) and half an ounce of rhubarb in powder, may be infused in a bottle of wine; and one, two, or three wine glasses of it taken daily, as shall be found necessary for keeping the body gently open. In cases where the bark itself proves sufficiently purgative, the rhubarb may be omitted.

Such as are subject to frequent attacks of the rheumatism ought to make choice of a dry, warm situation; to avoid the night-air, wet clothes, and wet feet, as much as possible. Their clothing chould be warm, and they should wear flannel next their skin, and make frequent use of the flesh-brush.

CHAP. XXXIX.

OF THE SCURVY.

THIS disease prevails chiefly in cold northern countries, especially in low damp situations, near large marshes, or great quantities of stagnating water. Sedentary people, of a dull melancholy disposition, are most subject to it. It proves often fatal to sailors on long voyages, particularly in ships that are not properly ventilated, have many people on board, or where cleanliness is neglected.

It is not necessary to mention the different species into which this disease has been divided, as they differ from one another chiefly in degree. What is called the LAND SCURVY, however, is seldom attended with those highly putrid symptoms which appear in patients who have been long at sea, and which, we presume, are rather owing to confined air, want of exercise, and the unwholesome food eaten by sailors on long voyages, than to any specific difference in the disease.

CAUSES.——The scurvy is occasioned by cold moist air; by the long use of salted or smoke-dried provisions, or any kind of food that is hard of digestion and affords little nourishment. It may also proceed from the suppression of customary evacuations; as the MENSES, the hæmorrhoidal flux, &c. It is sometimes owing to an hereditary taint, in which case a very small cause will excite the latent disorder. Grief, fear, and other depressing passions, have a great

tendency both to excite and aggravate this disease. The same observation holds with regard to neglect of cleanliness; bad clothing; the want of proper exercise; confined air; unwholesome food; or any disease which greatly weakens the body, or vitiates the humours.

SYMPTOMS.——This disease may be known by unusual weariness, heaviness, and difficulty of breathing, especially after motion; rottenness of the gums, which are apt to bleed on the slightest touch; a stinking breath; frequently bleeding at the nose; crackling of the joints; difficulty of walking; sometimes a swelling and sometimes a falling away of the legs, on which there are livid, yellow, or violet coloured spots; the face is generally of a pale or leaden colour. As the disease advances, other symptoms come on; as rottenness of the teeth; hæmorrhages or discharges of blood from different parts of the body: foul obstinate ulcers; pains in various parts, especially about the breast; dry scaly eruptions all over the body, &c. At last a wasting or hectic fever comes on, and the miserable patient is often carried off by a dysentery, a diarrhœa, a dropsy, the palsy, fainting fits, or a mortification of some of the bowels.

CURE.——We know no way of curing this disease but by pursuing a plan directly opposite to that which brings it on. It proceeds from a vitiated state of the humours, occasioned by errors in diet, air, or exercise; and this cannot be removed but by a proper attention to these important articles.

If the patient has been obliged to breathe a cold, damp, or confined air, he should be removed, as soon as possible, to a dry, open, and moderately warm one. If there is reason to believe that the disease proceeds from a sedentary life or depressing passions, as grief, fear, &c. the patient must take daily as much exercise in the open air as he can bear, and his mind should be diverted by cheerful company and other amusements. Nothing has a greater tendency either to prevent or remove this disease than constant cheerfulness and good humour. But this, alas! is seldom the lot of persons afflicted with the scurvy; they are generally surly, peevish, and morose.

When the scurvy has been brought on by a long use of salted provisions, the proper medicine is a diet consisting chiefly of fresh vegetables; as oranges, apples, lemons, limes, tamarinds, water-cresses, scurvy-grass, brook-lime, &c. The use of these, with milk, pot-herbs, new bread, and fresh beer or cyder, will seldom fail to remove a scurvy of this kind, if taken before it be too far advanced; but to have this effect, they must be persisted in for a considerable time. When fresh vegetables cannot be obtained, pickled or preserved ones may be used: and where these are wanting, recourse must be had to the chemical acids. All the patient's food and drink should in this case be sharpened with cream of tartar, elixir of vitriol, vinegar, or the MURIATIC ACID.

These things however will more certainly prevent than cure the scurvy, for which reason sea-faring people, especially on long voyages, ought to lay in plenty of them. Cabbages, onions, gooseberries, and many other vegetables, may be kept a long time by PICKLING, PRESERVING, &c. and when these fail, the chemical acids, recommended above, which will keep for any length of time, may be used. We have reason to believe, if ships were well ventilated, had got stores of fruits, greens, cyder, &c.

laid in, and if proper regard were paid to cleanliness and warmth, that sailors would be the most healthy people in the world, and would seldom suffer either from the scurvy or putrid fevers, which are so fatal to that useful set of men: but it is too much the temper of such people to despise all precaution; they will not think of any calamity till it overtakes them, when it is too late to ward off the blow. It must indeed be owned, that many of them have it not in their own power to make the provision we are speaking of; but in this case it is the duty of their employers to make it for them; and no man ought to engage in a long voyage without having these articles secured.

I have often seen very extraordinary effects in the land-scurvy from a milk diet. This preparation of Nature is a mixture of animal and vegetable properties, which of all others is the most fit for restoring a decayed constitution, and removing that particular acrimony of the humours which seems to constitute the very essence of the scurvy, and many other diseases. But people despise this wholesome and nourishing food, because it is cheap, and devour with greediness flesh and fermented liquors, while milk is only deemed fit for their hogs.

The most proper drink in the scurvy is whey or butter-milk. When these cannot be had, sound cyder, perry, or spruce-beer, may be used. Wort has likewise been found to be a proper drink in the scurvy, and may be used at sea, as malt will keep during the longest voyage. A decoction of the tops of the spruce fir is likewise proper: it may be drank in the quantity of an English pint twice a-day. Tar-water may be used for the same purpose, or decoctions of any of the mild mucilaginous vegetables; as sarsaparilla, marsh-mallow roots, &c. Infusions of the bitter plants, as ground-ivy, the lesser centaury, marsh-trefoil, &c. are likewise beneficial. I have seen the peasants in some parts of Britain express the juice of the last mentioned plant, and drink it with good effect in those foul scorbutic eruptions with which they are often troubled in the spring season.

Harrogate-water is certainly an excellent medicine in the land-scurvy. I have often seen patients, who had been reduced to the most deplorable condition by this disease, greatly relieved by drinking the sulphur-water, and bathing in it. The chalybeate-water may also be used with advantage, especially with a view to brace the stomach after drinking the sulphur-water, which, though it sharpens the appetite, never fails to weaken the powers of digestion.

A slight degree of scurvy may be carried off by frequently sucking a little of the juice of a bitter orange or a lemon. When the disease affects the gums only, this practice, if continued for some time, will generally carry it off. We would however recommend the bitter orange as greatly preferable to lemon; it seems to be as good a medicine, and is not so hurtful to the stomach. Perhaps our own sorrel may be little inferior to either of them.

All kinds of salad are good in the scurvy, and ought to be eaten very plentifully, as spinage, lettuce, parsly, celery, endive, radish, dandelion, &c. It is amazing to see how soon fresh vegetables in the spring cure the brute animals of any scab or foulness which is upon their skins. It is reasonable to suppose that their effects would be as great upon the human species, were they used in proper quantity for a sufficient length of time.

I have sometimes seen good effects in scorbutic complaints of very long standing from the use of a decoction of the roots of water-dock. It is usually made by boiling a pound of the fresh root in six English pints of water, till about one-third of it be consumed. The dose is from half a pint to a whole pint of the decoction every day. But in all the cases where I have seen it proved beneficial, it was made much stronger, and drank in large quantities. The safest way however is, for the patient to begin with small doses, and increase them both in strength and quantity as he finds his stomach will bear it. It must be used for a considerable time. I have known some take it for many months, and have been told of others who had used it for several years, before they were sensible of any benefit, but who nevertheless were cured by it at length.

The leprosy, which was common in this country long ago, seems to have been near a-kin to the scurvy. Perhaps its appearing so seldom now may be owing to the inhabitants of Britain eating more vegetable food than formerly, living more upon tea and other diluting diet, using less salted meat, being more cleanly, better lodged and clothed, &c.—For the cure of this disease we would recommend the same course of diet and medicine as in the scurvy.

Scorbutic blotches that often deform the face may frequently be removed by taking fifteen to twenty drops of the muriatic acid in a glass of distilled water. The best succedaneum for distilled water is river water, boiled a few minutes in a clean vessel: let it stand to cool, and its impurities will subside.

In all scorbutic complaints, the moderate use of wine, the free use of vegetable acids, as the juice of lemons, oranges, vinegar, currants, gooseberries, &c. together with a milk and vegetable diet, and plentiful ablutions of pure water, are very beneficial. It has lately been ascertained that the raw roots of carrots, turnips, &c. are more effectual in correcting scorbutic acrimony at sea, than those which have been boiled.

The following rules, observed by the late Lord Nelson for preserving the health of the crews under his command, merit the attention of all those who are entrusted with the health of mariners; it is well known that they were attended with the most signal good effects.

1. Great attention in victualling and purveying; wine to be used instead of spirits; fresh beef, vegetables, and fruit, as often as possible.

2. To avoid wetting the decks; at least between decks.

3. Constant activity; being always or as much as possible at sea, excluding idleness.

4. Prohibition of intemperance or skulking.

5. Cheerfulness among the men, promoted by music, dancing, &c.

6. Comfortable accommodation of the sick, by lodging them in airy sick-berths, placing them on a regular sick diet, and supplying them with live-stock, vegetables, fruit, soft bread, macaroni, and other articles of diet and refreshment, whenever the situation and circumstances permit.

7. By a standing order, cinchona (i. e. Peruvian bark) mixed in wine, or spirits, was regularly served to the men employed in the wooding and watering service: a drachm of powdered cinchona in one gill of spirits, or two of wine, was the proportion allowed for each man, to be administered in divided proportions on going on shore and on returning

on board. The method followed was to give the Peruvian bark in a small quantity of wine, or spirits, and to wash it down with a glass of wine or spirits mixed with an equal proportion of water. It was found that the spirit answered better as a vehicle for the cinchona than wine.

OF THE SCROPHULA, OR KING'S EVIL.

THIS disease chiefly affects the glands, especially those of the neck. Children and young persons of a sedentary life are very subject to it. It is one of those diseases which may be removed by proper regimen, but seldom yields to medicine. The inhabitants of cold, damp, marshy countries are most liable to the scrophula.

CAUSES.——This disease may proceed from an hereditary taint, from a scrophulous nurse, &c. Children who have the misfortune to be born of sickly parents, whose constitutions have been greatly injured by the pox, or other chronic diseases, are apt to be affected by the scrophula. It may likewise proceed from such diseases as weaken the habit or vitiate the humours, as the small-pox, measles, &c. External injuries, as blows, bruises, and the like, sometimes produce scrophulous ulcers; but we have reason to believe, when this happens, that there has been a predisposition in the habit to this disease. In short, whatever tends to vitiate the humours or relax the solids, paves the way to the scrophula; as the want of proper exercise, too much heat or cold, confined air, unwholesome food, bad water, the long use of poor, weak, watery aliments, the neglect of cleanliness, &c. Nothing tends more to induce this disease in children than allowing them to continue long wet, and to live on gross food, leading at the same time sedentary lives.

SYMPTOMS.——At first small knots appear under the chin or behind the ears, which gradually increase in number and size, till they form one large tumour. This often continues for a long time without breaking, and when it does break, it only discharges a thin sanies, or watery humour. Other parts of the body are likewise liable to its attack, as the arm-pits, groins, feet, hands, eyes, breasts, &c. Nor are the internal parts exempt from it; it often affects the lungs, liver, or spleen; and I have frequently seen the glands of the mesentery greatly enlarged by it.

Those obstinate ulcers which break out upon the feet and hands with swelling, and little or no redness, are of the scrophulous kind. They seldom discharge good matter, and are exceedingly difficult to cure.—The WHITE SWELLINGS of the joints seem likewise to be of this kind. They are with difficulty brought to a suppuration, and when opened they only discharge a thin ichor. There is not a more general symptom of the scrophula than a swelling of the upper lip and nose.

REGIMEN.——As this disease proceeds, in a great measure, from relaxation, the diet ought to be generous and nourishing, but at the same time light and of easy digestion; as well-fermented bread made of sound grain, the flesh and broth of young animals; with now and then a glass of generous wine or good ale. The air ought to be open, dry, and not too cold, and the patient should ke as much exercise as he can

bear. This is of the utmost importance. Children who have sufficient exercise are seldom troubled with the scrophula.

MEDICINE.——The vulgar are remarkably credulous with regard to the cure of the scrophula; many of them believing in the virtue of the royal touch, that of the seventh son, &c. The truth is, we know but little either of the nature or cure of this disease, and where reason or medicines fail, superstition always comes in their place. Hence it is, that, in diseases which are the most difficult to understand, we generally hear of the greatest number of miraculous cures being performed:—Here, however, the deception is easily accounted for. The scrophula, at a certain period of life, often cures of itself; and, if the patient happens to be touched about this time, the cure is imputed to the touch, and not to Nature, who is really the physician. In the same way the insignificant nostrums of quacks and old women often gain applause when they deserve none.

There is nothing more pernicious than the custom of plying children in the scrophula with strong purgative medicines. People imagine it proceeds from humours which must be purged off, without considering that these purgatives increase the debility and aggravate the disease. It has indeed been found, that keeping the body gently open for some time, especially with sea-water, has a good effect; but this should only be given in gross habits, and in such quantity as to procure one or at most two stools every day.

Bathing in the salt-water has also a very good effect, especially in the warm season. I have often known a course of bathing in salt-water, and drinking it in such quantities as to keep the body gently open, cure a scrophula, after many other medicines had been tried in vain. When salt-water cannot be obtained, the patient may be bathed in fresh water, and his body kept open by small quantities of salt and water, or some other mild purgative.

Next to cold bathing and drinking the salt-water, we would recommend CINCHONA (the Peruvian bark). The cold bath may be used in summer, and the bark in winter. To an adult half a drachm of the bark in powder may be given in a glass of red wine four or five times a-day. Children, and such as cannot take it in substance, may use the decoction made in the following manner:

Boil an ounce of CINCHONA and a drachm of Winter's bark, both grossly powdered, in an English quart of water, to a pint: towards the end, half an ounce of sliced liquorice-root and a handful of raisins may be added, which will both render the decoction less disagreeable, and make it take up more of the bark. The liquor must be strained, and two, three, or four table-spoonfuls, according to the age of the patient, given three times a-day.

The Moffat and Harrogate waters, especially the latter, are likewise very proper medicines in the scrophula. They ought not however to be drank in large quantities, but should be taken so as to keep the body gently open, and must be used for a considerable time.

The fresh powder or the inspissated juice of hemlock may sometimes be used with advantage in the scrophula. Some lay it down as a general rule, that the sea-water is most proper before there are any suppuration or symptoms of *tabes*; the Peruvian bark, when there are running sores,

and a degree of hectic fever; and the hemlock in old inveterate cases, approaching to the schirrous or cancerous state. Either the extract or the fresh juice of this plant may be used. The dose may be small at first, and increased gradually as far as the stomach is able to bear it.

External applications are of little use. Before the tumour breaks, nothing ought to be applied to it, unless a piece of flannel, or something to keep it warm. After it breaks, the sore may be dressed with some digestive ointment. What I have always found to answer best, was the ointment of yellow wax (yellow basilicon) mixed with about a sixth or eighth part of its weight of red nitrated quicksilver (red precipitate of mercury). The sore may be dressed with this twice a-day; and if it be very fungous, and does not digest well, a larger proportion of the precipitate may be added; or sprinkle the sores with the powder of burnt alum.

Medicines which mitigate this disease, though they do not cure it, are not to be despised. If the patient can be kept alive by any means till he arrive at the age of puberty, he has a great chance to get well; but if he does not recover at this time, in alll probability he never will.

There is no malady which parents are so apt to communicate to their offspring as the scrophula, for which reason people ought to be aware of marrying into families affected with this disease.

For the means of preventing the scrophula we must refer the reader to the observations on Nursing at the beginning of the book.

Sea air appears to have a specific virtue in this disease. To scrophulous swellings and glandular tumours, the marine plant commonly called SEA-TANG is applied, bruised and formed into a cataplasm: when that vegetable cannot be obtained in a recent state, a common poultice of sea-water has been substituted. Lime-water may be employed both externally and internally in cases of scrophula, for which it is not a contemptible remedy. The decoction or a strong infusion of colt's-foot leaves, or the compound decoction of sarsaparilla, may be taken with a scruple or half a drachm of burnt sponge, or a large tea-spoonful or two of the following electuary:

Take prepared natron three drachms, powder of cinchona one ounce and a half, thin mucilage of gum-arabic enough to form an electuary.

OF THE ITCH.

THOUGH this disease is commonly communicated by infection, yet it seldom prevails where due regard is paid to cleanliness, fresh air, and wholesome diet. It generally appears in form of small watery pustules, first about the rists, or between the fingers; afterwards it affects the arms, legs, thighs, &c. These pustules are attended with an intolerable itching, especially when the patient is warm in bed, or sits by the fire. Sometimes indeed the skin is covered with large blotches or scabs, and at other times with a white scurf, or scaly eruption. This last is called the dry itch, and is the most difficult to cure.

The itch is seldom a dangerous disease, unless when it is rendered so by neglect or improper treatment. If it be suffered to continue too long,

it may vitiate the whole mass of humours; and, if it be suddenly drove in, without proper evacuations, it may occasion fevers, inflammation of the viscera, or other internal disorders.

The best medicine yet known for the itch is sulphur, which ought to be used both internally and externally. The parts most affected may be rubbed with an ointment made of the flour of sulphur, two ounces; crude sal ammoniac finely powdered, two drachms; hog's lard, or butter, four ounces. If a scruple or half a drachm of the essence of lemon be added, it will entirely take away the disagreeable smell. About the bulk of a nutmeg of this may be rubbed upon the extremities at bed-time twice or thrice a-week. It is seldom necessary to rub the whole body; but when it is, it ought not to be done all at once, but by turns, as it is dangerous to stop too many pores at the same time.

Before the patient begins to use the ointment, he ought if he be of a full habit, to bleed or take a purge or two. It will likewise be proper, during the use of it, to take every night and morning as much of the flour of brimstone and cream of tartar, in a little treacle or new milk, as will keep the body gently open. He should beware of catching cold, should wear more clothes than usual, and take every thing warm. The same clothes, the linen excepted, ought to be worn all the time of using the ointment; and such clothes as have been worn while the patient was under the disease are not to be used again, unless they have been fumigated with brimstone, and thoroughly cleansed, otherwise they will communicate the infection anew.

The late Sir John Pringle observes, that though this disease may seem trifling, there is no one in the army that is more troublesome to cure, as the infection often lurks in clothes, &c. and breaks out a second or even a third time. The same inconveniency occurs in private families, unless particular regard is paid to the changing or cleaning of their clothes, which last is by no means an easy operation.

I never knew brimstone, when used as directed above, fail to cure the itch; and I have reason to believe, that, if duly persisted in, it never will fail; but if it be only used once or twice, and cleanliness neglected, it is no wonder if the disorder returns. The quantity of ointment mentioned above will generally be sufficient for the cure of one person; but if any symptoms of the disease should appear again, the medicine must be repeated. It is both more safe and efficacious when persisted in for a considerable time, than when a large quantity is applied at once. As most people dislike the smell of sulphur, they may use in its place the powder of white hellebore root made up into an ointment, in the same manner, which will seldom fail to cure the itch.

People ought to be extremely cautious lest they take other eruptions for the itch, as the stoppage of these may be attended with fatal consequences. Many of the eruptive disorders to which children are liable have a near resemblance to this disease; and I have often known infants killed by being rubbed with greasy ointments that make these eruptions strike suddenly in, which Nature had thrown out to preserve the patient's life, or prevent some other malady.

Much mischief is likewise done by the use of mercury in this disease. Some persons are so fool-hardy as to wash the parts affected with a strong

solution of MURIATED QUICKSILVER (the corrosive sublimate.)—Others use the mercurial ointment, without taking the least care either to avoid cold, keep the body open, or observe a proper regimen. The consequences of such conduct may be easily guessed. I have known even the mercurial girdles produce bad effects, and would advise every person, as he values his health, to beware how he uses them. Mercury ought never to be used as a medicine without the greatest care. Ignorant people look upon these girdles as a kind of charm, without considering that the mercury enters the body.

It is not to be told what mischief is done by using mercurial ointment for curing the itch and killing vermin; yet it is unnecessary for either: the former may be always more certainly cured by sulphur, and the latter will never be found where due regard is paid to cleanliness.

Those who would avoid this detestable disease ought to beware of infected persons, to use wholesome food, and to study universal cleanliness.

CHAP. XL.

OF THE ASTHMA.

THE asthma is a disease of the lungs, which seldom admits of a cure. Persons in the decline of life are most liable to it. It is distinguished into the moist and dry, or humoral and nervous. The former is attended with expectoration or spitting; but in the latter the patient seldom spits, unless sometimes a little tough phlegm by the mere force of coughing.

CAUSES.——The asthma is sometimes hereditary. It may likewise proceed from a bad formation of the breast; the fumes of metals or minerals taken into the lungs; violent exercise, especially running; the obstruction of customary evacuations, as the menses, hæmorrhoids, &c.; the sudden retrocession of the gout, or stricking in of eruptions, as the small-pox, measels, &c.; violent passions of the mind, as sudden fear or surprise. In a word, the disease may proceed from any cause that either impedes the circulation of the blood through the lungs, or prevents their being duly expanded by the air.

SYMPTOMS.——An asthma is known by a quick laborious breathing, which is generally performed with a kind of wheezing noise. Sometimes the difficulty of breathing is so great that the patient is obliged to keep in an erect posture, otherwise he is in danger of being suffocated. A fit or paroxysm of asthma generally happens after a person has been exposed to cold easterly winds, or has been abroad in thick foggy weather, or has got wet, or continued long in a damp place under ground, or has taken some food which the stomach could not digest, as pastries, toasted cheese, or the like.

The paroxysm is commonly ushered in with listlessness, want of sleep, hoarseness, a cough, belching of wind, a sense of heaviness about the breast, and difficulty of breathing. To these succeed heat, fever, pain of the head, sickness and nausea, great oppression of the breast, palpitation of the heart, a weak and sometimes intermitting pulse, an involuntary flow of tears, bilious vomitings, &c. All the symptoms grow worse towards night; the patient is easier when up than in bed, and is very desirous of cool air.

REGIMEN.——The food ought to be light and of easy digestion. Boiled meats are to be preferred to roasted, and the flesh of young animals to that of old. All windy food, and whatever is apt to swell in the stomach, are to be avoided. Light puddings, white broths, and ripe fruits baked, boiled, or roasted, are proper. Strong liquors of all kinds, especially malt-liquor, are hurtful. The patient should eat a very light supper, or rather none at all, and should never suffer himself to be long costive. His clothing should be warm, especially in the winter season. As all disorders of the breast are much relieved by keeping the feet warm, and promoting perspiration, a flannel shirt or waistcoat, and thick shoes, will be of singular service.

But nothing is of so great importance in the asthma as pure and moderately warm air. Asthmatic people can seldom bear either the close heavy air of a large town, or the sharp keen atmosphere of a bleak hilly country; a medium therefore between these is to be chosen. The air near a large town is often better than at a distance, provided the patient be removed so far as not to be affected by the smoke. Some asthmatic patients indeed breathe easier in town than in the country; but this is seldom the case, especially in towns where much coal is burnt. Asthmatic persons who are obliged to be in town all day ought at least to sleep out of it. Even this will often prove of great service. Those who can afford it ought to travel into a warmer climate. Many asthmatic persons who cannot live in Britain, enjoy very good health in the south of France, Portugal, Spain, or Italy.

Exercise is likewise of very great importance in the asthma, as it promotes the digestion and preparation of the blood. The blood of asthmatic persons is seldom duly prepared, owing to the proper action of the lungs being impeded. For this reason such people ought daily to take as much exercise, either on foot, horseback, or in a carriage, as they can bear.

MEDICINE.——Almost all that can be done by medicine in this disease, is to relieve the patient when seized with a violent fit. This indeed requires the greatest expedition, as the disease often proves suddenly fatal. In a paroxysm or fit, the body is generally bound; a purging clyster, with a solution of asafœtida, ought therefore to be administered, and, if there be occasion, it may be repeated two or three times. The patient's feet and legs ought to be immersed in warm water, and afterwards rubbed with a warm hand or dry cloth. Bleeding, unless extreme weakness or old age should forbid it, is highly proper. If there be a violent spasm about the breast or stomach, warm fomentations, or bladders filled with warm milk and water, may be applied to the part affected, and warm cataplasms to the soles of the feet. The patient must drink freely of diluting liquors, and may take a tea-spoonful of the tincture of

castor and of saffron mixed together in a cup of valerian-tea twice or thrice a-day. Sometimes a vomit has a very good effect, and snatches the patient as it were from the jaws of death. This however will be more safe after other evacuations have been premised. A very strong infusion of roasted coffee is said to give ease in an asthmatic paroxysm.

The acid of vinegar, distilled vinegar, or if that cannot be obtained, common vinegar, in a dose of two table-spoonfuls, diluted with an equal quantity of cold water, is a remedy, from which relief may be frequently obtained in the paroxysm. Dr. Bree, an experienced asthmatic, says that, "in asthma proceeding from the irritation of mucus, vinegar is the most useful medicine, in the paroxysm which I have tried."

In the moist asthma, garlic, and such things as promote expectoration or spitting, ought to be used; as the syrup of squills, gum-ammoniac, and such like. A common spoonful of the syrup or oxymel of squills, mixed with an equal quantity of cinnamon-water, may be taken three or four times through the day, and four or five pills made of equal parts of asafœtida and gum-ammoniac at bed-time.

After copious evacuations, large doses of VITRIOLIC ETHER have been found very efficacious in removing a fit of the asthma. I have likewise known the following mixture produce very happy effects. To five or six ounces of the solution or milk of gum-ammoniacum add two ounces of simple cinnamon-water, the same quantity of SYRUP OF BALSAM OF TOLA, and half an ounce of CAMPHORATED TINCTURE OF OPIUM. Of this two table-spoonfuls may be taken every three hours.

For the convulsive or nervous asthma, antispasmodics and bracers are the most proper medicines. The patient may take a tea-spoonful of the camphorated tincture of opium (paregoric elixir) twice a-day. The Peruvian bark is sometimes found to be of use in this case. It may be taken in substance, or infused in wine. In short, every thing that braces the nerves, or takes off spasm, may be of use in a nervous asthma. It is often relieved by the use of asses milk; I have likewise known cow's milk drank warm in the morning have a very good effect in this case.

In every species of asthma, setons and issues have a good effect; they may either be set in the back or side, and should never be allowed to dry up. We shall here, once for all, observe, that not only in the asthma, but in most chronic diseases, issues are extremely proper. They are both a safe and efficacious remedy; and though they do not always cure the disease, yet they will often prolong the patient's life.

CHAP. XLI.

OF THE APOPLEXY.

THE apoplexy is a sudden loss of sense and motion, during which the patient is to all appearance dead, the heart and lungs however still continue to move. Though this disease proves often fatal, yet it may sometimes be removed by proper care. It chiefly attacks sedentary persons of a gross habit, who use a rich and plentiful diet, and indulge in strong liquors. People in the decline of life are most subject to the apoplexy. It prevails most in winter, especially in rainy seasons and very low states of the barometer. In this as well as in many other diseases treated of in this work, the assistance of a gentleman of integrity and skill in the medical profession ought if possible to be obtained.

CAUSES.—The immediate cause of an apoplexy is a compression of the brain, occasioned by an excess of blood, or a collection of watery humours. The former is called a SANGUINE, and the latter a SEROUS apoplexy. It may be occasioned by any thing that increases the circulation towards the brain, or prevents the return of the blood from the head; as intense study; violent passions; viewing objects for a long time obliquely; wearing any thing too tight about the neck; a rich and luxurious diet; suppression of urine; suffering the body to cool suddenly after having been greatly heated; continuing long in a warm or cold bath; the excessive use of spiceries, or high seasoned food; excess of venery; the sudden striking in of any eruption; suffering issues, setons, &c. suddenly to dry up, or the stoppage of any customary evacuation; a mercurial salivation pushed too far, or suddenly checked by cold; wounds or bruises on the head; long exposure to excessive cold; poisonous exhalations, &c.

SYMPTOMS, and Method of CURE.——The usual forerunners of an apoplexy are giddiness, pain, and swimming of the head; loss of memory; drowsiness; noise in the ears; the night-mare; a spontaneous flux of tears; and laborious respiration. When persons of an apoplectic make observe these symptoms, they have reason to fear the approach of a fit, and should endeavour to prevent it by bleeding, a slender diet, and opening medicines.

In the sanguine apoplexy, if the patient does not die suddenly, the countenance appears florid, the face is swelled or puffed up, and the blood vessels, especially about the neck and temples, are turgid; the pulse beats strong; the eyes are prominent and fixed, and the breathing is difficult, and performed with a snorting noise. The excrements and urine are often voided spontaneously, and the patient is sometimes seized with vomiting.

In this species of apoplexy every method must be taken to lessen the force of the circulation towards the head. The patient should be kept perfectly easy and cool. His head should be raised pretty high, and his feet suffered to hang down. His clothes ought to be loosened, especially about the neck, and fresh air admitted into his chamber. His garters

should be tied pretty tight, by which means the motion of the blood from the lower extremities will be retarded. As soon as the patient is placed in a proper posture, he should be bled freely in the neck or arm, and, if there be occasion, the operation may be repeated in two or three hours. A laxative clyster, with plenty of sweet oil or fresh butter, and a spoonful or two of common salt in it, may be administered every two hours; and blistering-plasters applied between the shoulders, and to the calves of the legs.

As soon as the symptoms are a little abated, and the patient is able to swallow, he ought to drink freely of some diluting opening liquor, as a decoction of tamarinds and liquorice, cream-tartar-whey, or common whey with cream of tartar dissolved in it. Or he may take any cooling purge, as vitriolated natron (Glauber's salt), manna dissolved in an infusion of senna, or the like. All spirits and other strong liquors are to be avoided. Even volatile salts held to the nose do mischief. Vomits, for the same reason, ought not to be given, or any thing that may increase the motion of the blood towards the head. In this species of apoplexy we prescribe a vegetable regimen.

In the serous apoplexy, the symptoms are nearly the same, only the pulse is not so strong, the countenance is less florid, and the breathing less difficult. Bleeding is not so necessary here as in the former case. It may generally be performed once with safety and advantage, but should not be repeated. The patient should be placed in the same posture as directed above, and should have blistering-plasters applied, and receive opening clysters in the same manner. Purges are here likewise necessary, and the patient may drink strong balm-tea. If he be inclined to sweat, it ought to be promoted by drinking small wine-whey, or an infusion of cardus benedictus. A plentiful sweat kept up for a considerable time has often carried off a serous apoplexy.

When apoplectic symptoms proceed from opium or other narcotic substances taken into the stomach, vomits are necessary. The patient is generally relieved as soon as he has discharged the poison in this way: as soon as the emetic has operated, we think it advisable for the patient to take copious draughts of lemonade, or of white-wine vinegar diluted with water.

Persons of an apoplectic make, or those who have been attacked by it, ought to use a very spare and slender diet, avoiding all strong liquors, spiceries, and high-seasoned food. They ought likewise to guard against all violent passions, and to avoid the extremes of heat and cold. The head should be shaved, and daily washed with cold water. The feet ought to be kept warm, and never suffered to continue long wet. The body must be kept open either by food or medicine, and a little blood may be let every spring and fall. Exercise should by no means be neglected; but it ought to be taken in moderation. Nothing has a more happy effect in preventing an apoplexy than perpetual issues or setons: great care however must be taken not to suffer them to dry up, without opening others in their stead. Apoplectic persons ought never to go to rest with a full stomach, or to lie with their heads low, or wear any thing tight about their necks.

CHAP. XLII.

OF COSTIVENESS AND OTHER AFFECTIONS OF THE STOMACH AND BOWELS.

WE do not here mean to treat of those astrictions of the bowels which are the symptoms of diseases, as of the colic, the iliac passion, &c., but only to take notice of that infrequency of stools which sometimes happens, and which in some particular consitutions may occasion diseases.

Costiveness may proceed from drinking rough red wines, or other astringent liquors; too much exercise, especially on horseback. It may likewise proceed from a long use of insipid food, which does not sufficiently stimulate the intestines. Sometimes it is owing to the bile not descending to the intestines, as in the jaundice; and at other times it proceeds from diseases of the intestines themselves, as a palsy, spasms, torpor, tumours, a cold dry state of the intestines, &c.

Excessive costiveness is apt to occasion pains of the head, vomiting, colics, and other complaints of the bowels. It is peculiarly hurtful to hypochondriac and hysteric persons, as it generates wind and other grievous symptoms.

Persons who are generally costive should live upon a moistening and laxative diet, as roasted or boiled apples, pears, stewed prunes, raisins, gruel with currants, butter, honey, sugar, and such like. Broths with spinage, leeks, and other soft pot-herbs, are likewise proper. Rye bread, or that which is made of a mixture of wheat and rye together, ought to be eaten. No person troubled with costiveness should eat white bread alone, especially that which is made of fine flour. The best bread for keeping the body soluble is what in some parts of England they call MESLIN. It is made of a mixture of wheat and rye, and is very agreeable to those who are accustomed to it.

Costiveness is increased by keeping the body too warm, and by every thing that promotes the perspiration; as wearing flannel, lying too long in bed, &c. Intense thought and a sedentary life are likewise hurtful.

All the secretions and excretions are promoted by moderate exercise without doors, and by a gay, cheerful, sprightly temper of mind.

The drink should be of an opening quality. All ardent spirits, austere and astringent wines, as port, claret, &c. ought to be avoided. Malt-liquor that is fine, and of a moderate strength, is very proper. Butter-milk, whey, and other watery liquors, are likewise proper, and may be drank in turns, as the patient's inclination directs.

Those who are troubled with costiveness, ought, if possible, to remedy it by diet, as the constant use of medicines for that purpose is attended with many inconveniences, and often with bad consequences. I never knew any one get into a habit of taking medicine for keeping the body open, who could leave it off. In time the custom becomes necessary, and generally ends in a total relaxation of the bowels, indigestion, loss of appetite, wasting of the strength, and death.

When the body cannot be kept open without medicine, we would recommend gentle doses of rhubarb, or of the wine of aloes, to be taken twice or thrice a week. This is not near so injurious to the stomach as aloes, jalap, or the other drastic purgatives so much in use. Infusions of senna and manna may likewise be taken, or half an ounce of tartarized kali dissolved in water-gruel. About the size of a nutmeg of electuary of senna taken twice a-day generally answers the purpose very well.

The learned Dr. Arbuthnot advises those who are troubled with costiveness to use animal oils, as fresh butter, cream, marrow, fat broths, especially those made of the internal parts of animals, as the liver, heart, midriff, &c. He likewise recommends the expressed oils of mild vegetables, as olives, almonds, pistachios, and the fruits themselves; all oily and mild fruits, as figs; decoctions of mealy vegetables; these lubricate the intestines: some saponaceous substances which stimulate gently, as honey, hydromel, or boiled honey and water, unrefined sugar, &c.

The Doctor observes, that such lenitive substances are proper for persons of dry atrabilarian constitutions, who are subject to astriction of the belly and the piles, and will operate when stronger medical substances are sometimes ineffectual; but that such lenitive diet hurts those whose bowels are weak and lax. He likewise observes that all watery substances are lenitive, and that even common water, whey, sour milk, and butter-milk, have that effect:—That new milk, especially asses milk stimulates still more when it sours on the stomach; and that whey turned sour will purge strongly.

Milk in which the leaves of mallows has been boiled is serviceable to persons of a costive habit: a large onion or two, eaten over-night, will in ordinary cases prove laxative. Some people take Scotch oat-meal (a table-spoonful or more), mixed with treacle, before breakfast. Persons afflicted with the none, and pregnant women, may take as a lenient stimulant to the bowels, the size of a walnut of the *electuary of senna*, or a table-spoonful or two of castor oil, in peppermint-water, or mixed with a little tincture of senna.

A late physician of considerable practice in London and its environs was called to a youth labouring under an obstinate constipation of the bowels, which baffled the Doctor's efforts to move; a large cataplasm of boiled onions was therefore ordered to be applied to the abdomen of the patient: that "domestic medicine" loosened the belly, and procured the desired relief.

When enemas, lavements, or clysters, are given to remove obstinate costiveness, they should be of the most simple kind, and repeatedly administered; such as warm water with two or three table-spoonfuls of fine oil; or a solution of Castile soap; since it is to the diluting, resolving effects of these injections, that we chiefly trust: if necessary, some gentle stimulant may be added, of which a quarter or half an ounce of common salt seems to be the best for domestic practice.

WANT OF APPETITE.

THIS may proceed from a foul stomach; indigestion; the want of free air and exercise; grief, fear, anxiety, or any of the depressing passions; excessive heat; the use of strong broths, fat meats, or any thing that palls the appetite, or is hard of digestion; the immoderate use of strong liquors, tea, tobacco, opium, &c.

The patient ought, if possible, to make choice of an open dry air: to take exercise daily on horseback or in a carriage; to rise betimes; and to avoid all intense thought. He should use a diet of easy digestion; and should avoid excessive heat and great fatigue.

If want of appetite proceeds from errors in diet, or any other part of the patient's regimen, it ought to be changed. If nausea and retchings shew that the stomach is loaded with crudities, an emetic will be of service. After this a gentle purge or two of rhubarb, tartarized kali, or any of the bitter purging salts, may be taken. The patient ought next to use a cupful of an infusion of camomile flowers drank cold every morning for a week or ten days, or some of the stomachic bitters infused in wine. Though gentle evacuations be necessary, yet strong purges and vomits are to be avoided, as they weaken the stomach, and hurt digestion.

Elixir of vitriol is an excellent medicine in most cases of indigestion, weakness of the stomach, or want of appetite. From twenty to thirty drops of it may be taken twice or thrice a-day, in a glass of wine or water. It may likewise be mixed with a tincture of the bark, one drachm of the former to an ounce of the latter, and two tea-spoonfuls of it taken in wine and water, as above.

The chalybeate waters of Spa, Tunbridge, or Islington, if drank in moderation, are generally of considerable service in this case. The sea-water has likewise good effects; but it must not be used too freely. The waters of Harrogate, Scarborough, Moffat, and most other spas in Britain, may be used with advantage. We would advise all who are afflicted with indigestion and want of appetite, to repair to these places of public rendezvous. Change of air, and the cheerful company, will be of service, not to mention the exercise, dissipation, and varied amusements.

OF THE HEART-BURN.

WHAT is commonly called the *heart-burn* is not a disease of that organ, but an uneasy sensation of heat, or acrimony, about the pit of the stomach, which is sometimes attended with anxiety, nausea, and vomiting.

It may proceed from debility of the stomach, indigestion, bile, the abounding of an acid in the stomach, &c. Persons who are liable to this complaint ought to avoid stale liquors, acids, windy or greasy aliments, and should never use violent exercise soon afetr a plentiful meal. I know many persons who never fail to have the heart-burn if they ride soon after dinner, provided they have drank ale, wine, or drank rum or brandy and water without any sugar or acid.

When the heart-burn proceeds from debility of the stomach, or indigestion, the patient ought to take a dose or two of rhubarb; afterwards he may use infusions of the Peruvian bark, or any of the stomachic bitters, in wine or brandy. Exercise in the open air will likewise be of use, and every thing that promotes digestion.

When bilious humours occasion the heart-burn, a tea-spoonful of the SPIRIT OF NITROUS ETHER in a glass of water, or a cup of tea, will generally give ease. If it proceeds from the use of greasy aliments, a dram of brandy or rum may be taken.

If acidity or sourness of the stomach occasions the heart-burn, absorbents are the proper medicines. In this case an ounce of powdered chalk, half an ounce of fine sugar, and a quarter of an ounce of gum-arabic, may be mixed in an English quart of water, and a tea-cupful of it taken as often as is necessary. Such as do not chuse chalk, may take a tea-spoonful of prepared oyster-shells, or of the powder called crabs-eyes, in a glass of cinnamon or peppermint-water But the safest and best absorbent is MAGNESIA ALBA. This not only acts as an absorbent, but likewise as a purgative; whereas chalk, and other absorbents of that kind, are apt to lie in the intestines, and occasion obstructions. This powder is not disagreeable, and may be taken in a cup of tea, or a glass of mint-water. A large tea-spoonful is the usual dose; but it may be taken in a much greater quantity when there is occasion. These things are now generally made up into lozenges for the convenience of being carried in the pocket, and taken at pleasure.

If wind be the cause of this complaint, the most proper medicines are those called carminatives; as aniseeds, juniper-berries, ginger, canella alba, cardamomum seeds, &c. These may either be chewed, or infused in wine, brandy, or other spirits. One of the safest medicines of this kind is the tincture made by infusing an ounce of rhubarb, and a quarter of an ounce of the lesser cardamomum seeds, in an English pint of brandy. After this has digested for two or three days, it ought to be strained, and four ounces of white sugar-candy added to it. It must stand to digest a second time till the sugar be dissolved. A table-spoonful of it may be taken occasionally for a dose.

I have frequently known the heart-burn cured, particularly in pregnant women, by chewing green tea. Two table-spoonfuls of what is called the milk of gum-ammoniacum, taken once or twice a-day, will sometimes cure the heart-burn.

CHAP. XLIII.

OF NERVOUS DISEASES.

OF all diseases incident to mankind, those of the nervous kind are the most complicated and difficult to cure. A volume would not be

sufficient to point out their various appearances. They imitate almost every disease; and are seldom alike in two different persons, or even the same person at different times. Protus like, they are continually changing shape: and upon every fresh attack, the patient thinks he feels symptoms which he never experienced before. Nor do they only affect the body; the mind likewise suffers, and is often thereby rendered extremely weak and peevish. The low spirits, timorousness, melancholy, and fickleness of temper which generally attend nervous disorders, induce many to believe that they are entirely diseases of the mind; but this change of temper is rather a consequence than the cause of nervous diseases.

CAUSES.——Every thing that tends to relax or weaken the body disposes it to nervous diseases, as indolence, excessive venery, drinking too much tea, or other weak watery liquors warm, frequent bleeding, purging, vomiting, &c. Whatever hurts the digestion, or prevents the proper assimilation of the food, has likewise this effect; as long fasting, excess of eating or drinking, the use of windy, crude, or unwholesome aliments, an unfavourable posture of the body, &c.

Nervous disorders often proceed from intense application to study. Indeed few studious persons are entirely free from them. Nor is this at all to be wondered at: intense thinking not only preys upon the spirits, but prevents the person from taking proper exercise, by which means the digestion is impaired, the nourishment prevented, the solids relaxed, and the whole mass of humours vitiated. Grief and disappointment likewise produce the same effects. I have known more nervous patients who dated the commencement of their disorders from the loss of a husband, a favourite child, or from some disappointment in life, than from any other cause. In a word, whatever weakens the body, or depresses the spirits, may occasion nervous disorders, as unwholesome air, want of sleep, great fatigue, disagreeable apprehensions, anxiety, vexation, &c.

SYMPTOMS.——We shall only mention some of the most general symptoms of these disorders, as it would be both an useless and an endless task to enumerate the whole. They generally begin with windy inflations or distentions of the stomach and intestines: the appetite and digestion are usually bad; yet sometimes there is an uncommon craving for food, and a quick digestion. The food often turns sour on the stomach; and the patient is troubled with vomiting of clear water, tough phlegm, or a blackish-coloured liquor resembling the grounds of coffee. Excruciating pains are often felt about the navel, attended with a rumbling or murmuring noise in the bowels. The body is sometimes loose, but more commonly bound, which occasions a retention of wind and great uneasiness.

The urine is sometimes in small quantity, at other times very copious and quite clear. There is a great straitness of the breast, with difficulty of breathing; violent palpitations of the heart; sudden flushings of heat in various parts of the body: at other times a sense of cold, as if water were poured on them; flying pains in the arms and limbs; pains in the back and belly, resembling those occasioned by gravel; the pulse very variable, sometimes uncommonly slow, and at other times very quick; yawning, the hiccup, frequent sighing, and a sense of suffocation, as if from a ball or lump in the throat: alternate fits of crying and convulsive

laughing; the sleep is unsound, and seldom refreshing; and the patient is often troubled with the night mare.

As the disease increases, the patient is molested with head-achs, cramps, and fixed pains in various parts of the body; the eyes are clouded, and often affected with pain and dryness; there is a noise in the ears, and often a dulness of hearing; in short, the whole animal functions are impaired. The mind is disturbed on the most trivial occasions, and is hurried into the most perverse commotions, inquietudes, terror, sadness, anger, diffidence, &c. The patient is apt to entertain wild imaginations and extravagant fancies; the memory becomes weak, and the judgment fails.

Nothing is more characteristic of this disease than a constant dread of death. This renders those unhappy persons who labour under it peevish, fickle, impatient, and apt to run from one physician to another; which is one reason why they seldom reap any benefit from medicine, as they have not sufficient resolution to persist in any one course till it has time to produce its proper effects. They are likewise apt to imagine that they labour under diseases from which they are quite free; and are very angry if any one attempts to set them right, or laugh them out of their ridiculous notions.

REGIMEN.——Persons afflicted with nervous diseases ought never to fast long. Their food should be solid and nourishing, but of easy digestion. Fat meats and heavy sauces are hurtful. All excess should be carefully avoided. They ought never to eat more at a time than they can easily digest; but if they feel themselves weak and faint between meals, they ought to eat a bit of bread, and drink a glass of wine. Heavy suppers are to be avoided. Though wine in excess enfeebles the body, and impairs the faculties of the mind, yet taken in moderation it strengthens the stomach, and promotes digestion. Wine and water is a very proper drink at meals; but if wine sours on the stomach, or the patient is much troubled with wind, brandy and water will answer better. Every thing that is windy or hard of digestion must be avoided. All weak and warm liquors are hurtful, as tea, coffee, punch, &c. People may find a temporary relief in the use of these, but they always increase the malady, as they weaken the stomach, and hurt digestion. Above all things, drams are to be avoided. Whatever immediate ease the patient may feel from the use of ardent spirits, they are sure to aggravate the malady, and prove certain poisons at last. These cautions are the more necessary, as most nervous people are peculiarly fond of tea and ardent spirits; to the use of which many of them fall victims.

Exercise in nervous disorders is superior to all medicines. Riding on horseback is generally esteemed the best, as it gives motion to the whole body, without fatiguing it. I have known some patients, however, with whom walking agreed better, and others who were most benefited by riding in a carriage. Every one ought to use that which he finds most beneficial. Long sea-voyages have an excellent effect; and to those who have sufficient resolution, we would by all means recommend the course. Even change of place, and the sight of new objects, by diverting the mind, have a great tendency to remove these complaints. For this reason a long journey, or a voyage, is of much more advantage than riding short journies near home.

A cool and dry air is proper, as it braces and invigorates the whole body. Few things tend more to relax and enervate than hot air, especially that which is rendered so by great fires, or stoves in small apartments. But when the stomach or bowels are weak, the body ought to be well guarded against cold, especially in winter, by wearing a thin flannel waistcoat next the skin. This will keep up an equal perspiration, and defend the alimentary canal from many impressions to which it would otherwise be subject upon every sudden change from warm to cold weather. Rubbing the body frequently with a flesh-brush, or a coarse linen cloth, is likewise beneficial, as it promotes the circulation, perspiration, &c. Persons who have weak nerves ought to rise early and take exercise before breakfast, as lying too long a-bed cannot fail to relax the solids. They ought likewise to be diverted, and to be kept as easy and cheerful as possible. There is not any thing which hurts the nervous system, or weakens the digestive powers, more than fear, grief, or anxiety.

MEDICINES.——Though nervous diseases are seldom radically cured, yet their symptoms may sometimes be alleviated, and the patient's life rendered at least more comfortable by proper medicines.

When the patient is costive, he ought to take a little rhubarb, or some other mild purgative, and should never suffer his body to be long bound. All strong and violent purgatives are however to be avoided, as aloes, jalap, &c. I have generally seen an infusion of senna and rhubarb in brandy answer very well. This may be made of any strength, and taken in such quantity as the patient finds necessary. When digestion is bad, or the stomach relaxed and weak, the waters of Tunbridge, or Islington, or the following infusion of Peruvian bark and other bitters, may be used with advantage.

Take of cinchona an ounce; gentian root, orange-peel, and coriander-seed, of each half an ounce; let these ingredients be all bruised in a mortar, and infused in a bottle of brandy or rum, for the space of five or six days. A table-spoonful of the strained liquor may be taken in half a glass of water, an hour before breakfast, dinner, and supper.

Few things tend more to strengthen the nervous system than cold bathing. This practice, if duly persisted in, will produce very extraordinary effects; but when the liver or other viscera are obstructed, or otherwise unsound, the cold bath is improper. It is therefore to be used with very great caution. The most proper seasons for it are summer and autumn. It will be sufficient, especially for persons of a spare habit, to go into the cold bath three or four times a-week. If the patient be weakened by it, or feels chilly for a long time after coming out, it is improper.

In patients afflicted with wind, I have always observed the greatest benefit from the diluted acid of vitriol. It may be taken in the quantity of fifteen, twenty, or thirty drops, twice or thrice a-day, in a glass of water. This both expels wind, strengthens the stomach, and promotes digestion.

Opiates are generally extolled in these maladies; but as they only palliate the symptoms, and generally afterwards increase the disease, we would advise people to be extremely sparing in the use of them, lest habit render them at last absolutely necessary.

It would be an easy matter to enumerate many medicines which have been extolled for relieving nervous disorders; but whoever wishes for a thorough cure, must expect it from regimen alone: we shall therefore omit mentioning more medicines, and again recommend the strictest attention to diet, air, exercise, and amusements.

OF MELANCHOLY.

MELANCHOLY is that state of alienation or weakness of mind which renders people incapable of enjoying the pleasures or performing the duties of life. It is a degree of insanity, and often terminates in absolute madness.

CAUSES.——It may proceed from an hereditary disposition; intense thinking, especially where the mind is long occupied about one object; violent passions or affections of the mind, as love, fear, joy, grief, pride, and such like. It may also be occasioned by excessive venery; narcotic or stupefactive poisons; a sedentary life; solitude; the suppression of customary evacuations; acute fevers; or other diseases. Violent anger will change melancholy into madness; and excessive cold, especially of the lower extremities, will force the blood into the brain, and produce all the symptoms of madness. It may likewise proceed from the use of aliment that is hard of digestion, or which cannot be easily assimilated; from a callous state of the integuments of the brain, or a dryness of the brain itself. To all which we may add, gloomy and mistaken notions of religion.

SYMPTOMS.——When persons begin to be melancholy, they are timorous; watchful; fond of solitude; fretful; fickle; captious and inquisitive; solicitous about trifles; sometimes niggardly, and at other times prodigal. The body is generally bound; the urine thin, and in small quantity; the stomach and bowels inflated with wind; the complexion pale; the pulse low and weak. The functions of the mind are also greatly perverted, insomuch that the patient often imagines himself dead, or changed into some other animal. Some have imagined their bodies were made of glass, or other brittle substances, and were afraid to move, lest they should be broken to pieces. The unhappy patient, in this case, unless carefully watched, is apt to put an end to his own miserable life.

When the disease is owing to an obstruction of customary evacuations, or any bodily disorder, it is easier cured than when it proceeds from affections of the mind, or an hereditary taint. A discharge of blood from the nose, looseness, scabby eruptions, the bleeding piles, or the menses, sometimes carry off this disease.

REGIMEN.——The diet should consist chiefly of vegetables of a cooling and opening quality. Animal food, especially salted or smoke-dried fish or flesh, ought to be avoided. All kinds of shell-fish are bad. Aliments prepared with onions, garlic, or any thing that generates thick blood, are likewise improper. All kinds of fruits that are wholesome may be eaten with advantage. Boerhaave gives an instance of a patient who, by a long use of whey, water, and garden-fruit, recovered after having evacuated a great quantity of black-coloured matter.

Strong liquors of every kind ought to be avoided as poison. The

most proper drink is water, whey, or very small beer. Tea and coffee are improper. If honey agrees with the patient, it may be eaten freely, or his drink may be sweetened with it. Infusion of balm-leaves, penny-royal, the roots of wild valerian, or the flowers of the lime-tree, may be drank freely, either by themselves or sweetened with honey, as the patient should chuse.

The patient ought to take as much exercise in the open air as he can bear. This helps to dissolve the viscid humours, it removes obstructions, promotes the perspiration, and all the other secretions. Every kind of madness is attended with a diminished perspiration; all means ought therefore to be used to promote that necessary and salutary discharge. Nothing can have a more direct tendency to increase the disease than confining the patient to a close apartment. Were he forced to ride or walk a certain number of miles every day, it would tend greatly to alleviate his disorder; but it would have still a better effect, if he were obliged to labour a piece of ground. By digging, hoeing, planting, sowing, &c. both the body and mind would be exercised. A long journey, or a voyage, especially towards a warmer climate, with agreeable companions, have often very happy effects. A plan of this kind, with a strict attention to diet, is a much more rational method of cure, than confining the patient within doors, and plying him with medicines.

MEDICINE.——In the cure of this disease particular attention must be paid to the mind. When the patient is in a low state, his mind ought to be soothed and diverted with variety of amusements, as entertaining stories, pastimes, music, &c. This seems to have been the method of curing melancholy among the Jews, as we learn from the story of King Saul; and indeed it is a very rational one. Nothing can remove diseases of the mind so effectually as applications to the mind itself, the most efficacious of which is music. It mitigates bodily pain, suspends the malignant influence of madness and despair, and soothes the soul into a peaceful and tranquil state.

"Music the fiercest grief can charm,
"And fate's severest rage disarm;
"Music can soften pain to ease,
"And make despair and madness please;
"Our joys below it can improve,
"And antedate the bliss above."

The patient's company ought likewise to consist of such persons as are agreeable to him. People in this state are apt to conceive unaccountable aversions against particular persons; and the very sight of such persons is sufficient to distract their minds, and throw them into the utmost perturbation.

When the patient is high, evacuations are necessary. In this case he must be bled, and have his body kept open by purging medicines, as manna, rhubarb, cream of tartar, or tartarized kali. I have seen the last have very happy effects. It may be taken in a dose of half an ounce, dissolved in water-gruel, every day for several weeks, or even for months, if necessary. More or less may be given according as it operates. Vomits have likewise a good effect; but they must be pretty strong, otherwise they will not operate.

Whatever increases the evacuation of urine, or promotes perspiration, has a tendency to remove this disease. Both these secretions may be promoted by the use of nitre and vinegar. Half a drachm of purified nitre may be given three or four times a-day in any manner that is most agreeable to the patient; and an ounce and a half of distilled vinegar may be daily mixed with his drink. Dr. Locker seems to think vinegar the best medicine that can be given in this disease.

Champhire and musk have likewise been used in this case with advantage. Ten or twelve grains of champhire may be rubbed in a mortar with half a drachm of nitre, and taken twice a-day, or oftener, if the stomach will bear it. If it will not sit upon the stomach in this form, it may be made into pills with gum-asafœtida and Russian castor, and taken in the quantity above directed. If musk is to be administered, a scruple or twenty-five grains of it may be made into a bolus with a little honey or common syrup, and taken twice or thrice a-day. We do not mean that all these medicines should be administered at once: but whichever of them is given must be duly persisted in, and where one fails another may be tried.

As it is difficult to induce patients in this disease to take medicines, we shall mention a few outward applications which sometimes do good; the principal of these are issues, setons, and warm bathing. Issues may be made in any part of the body, but they generally have the best effect near the spine. The discharge from these may be greatly promoted by dressing them with the mild blistering ointment, and keeping what are commonly called the orrice pease in them. The most proper place for a seton is between the shoulder blades; and it ought to be placed upwards and downwards, or in the direction of the spine.

In this, as in nervous diseases, varied amusements, a long journey, or even change of climate, may be found advisable.

OF THE PALSY.

THE palsy is a loss or diminution of sense or motion, or of both, in one or more parts of the body. Of all the affections called nervous, this is the most suddenly fatal. It is more or less dangerous, according to the importance of the part affected. A palsy of the heart, lungs, or any part necessary to life, is mortal. When it affects the stomach, the intestines, or the bladder, it is highly dangerous. If the face be affected, the case is bad, as it shews that the disease proceeds from the brain. When the part affected feels cold, is insensible, or wastes away, or when the judgment and memory begin to fail, there is small hopes of a cure.

CAUSES.——The immediate cause of palsy is any thing that prevents the regular exertion of the nervous power upon any particular muscle or part of the body. The occasional and predisposing causes are various, as drunkenness; wounds of the brain, or spinal marrow; pressure upon the brain, or nerves; very cold or damp air; the suppression of customary evacuations; sudden fear, want of exercise; or whatever greatly relaxes the system, as drinking much tea, or coffee. The palsy may likewise proceed from wounds of the nerves themselves; from the poisonous fumes of metals, as quicksilver, lead, arsenic, &c.

Many people imagine that tea has no tendency to hurt the nerves, and

that drinking the same quantity of warm water would be equally pernicious. This however seems to be a mistake. Some persons drink three or four cups of warm milk and water daily, without feeling any bad consequences; yet the same quantity of tea will make their hands shake for twenty-four hours. That tea affects the nerves is likewise evident from preventing sleep, occasioning giddiness, dimness of the sight, sickness, &c.

In young persons of a full habit, the palsy must be treated in the same manner as the sanguine apoplexy. The patient must be bled, blistered, and have his body opened by sharp clysters or purgative medicines. But in old age, or when the disease proceeds from relaxation or debility, which is generally the case, a quite contrary course must be pursued. The diet must be warm and invigorating, seasoned with spicy and aromatic vegetables, as mustard, horse-radish, &c. The drink may be generous wine, mustard-whey, or brandy and water. Friction with the flesh-brush, or a warm hand, is extremely proper, especially on the parts affected. Blistering plasters may likewise be applied to the affected part with advantage. When this cannot be done, they may be rubbed with the LINIMENT OF AMMONIA, or the nerve ointment of the Edinburgh dispensatory. One of the best external applications is electricity. The shocks, or rather vibrations, should be received in the part affected; and they ought daily to be repeated for several weeks.

Vomits and chalybeate waters are very beneficial in this kind of palsy, and ought frequently to be administered. Cephalic snuff, or any thing that makes the patient sneeze, is likewise of use. Some pretend to have found great benefit from rubbing the parts affected with nettles; but this does not seem to be any way preferable to blistering. If the tongue is affected, the patient may gargle his mouth frequently with brandy and mustard; or he may hold a bit of sugar in his mouth wet with the palsy-drops or compounded spirits of lavender. The wild valerian-root is a very proper medicine in this case. It may either be taken in an infusion with sage-leaves, or half a drachm of it in powder may be given in a glass of wine three or four times a-day. If the patient cannot use the valerian, he may take of compound spirits of ammonia, compound spirits of lavender, and tincture of castor, each half an ounce; mix these together, and take forty or fifty drops in a glass of wine three or four times a-day. A table-spoonful of mustard-seed taken frequently is a very good medicine. The patient ought likewise to chew cinnamon-bark, ginger, or other warm spiceries. He may also take every four or six hours three or four table-spoonfuls of the following mixture: Prepared ammonia two scruples; compound tincture of cardamoms and syrup of orange-peel, of each one ounce; pennyroyal water eleven ounces; mix.

Exercise is of the utmost importance in the palsy; but the patient must beware of cold, damp, and moist air. He ought to wear flannel next his skin; and, if impossible, should remove into a warmer climate.

Oil of petroleum is an acrid and useful stimulant in this disease: in every kind of paralytic complaints, Bath waters, under proper regulations, have been found of advantage.

OF THE EPILEPSY, OR FALLING SICKNESS.

THE epilepsy is a sudden deprivation of all the senses, wherein the patient falls suddenly down, and is affected with violent convulsive motions. Children, especially those who are delicately brought up, are most subject to it. It more frequently attacks men than women, and is very difficult to cure. When the epilepsy attacks children, there is reason to hope it may go off about the time of puberty.

When it attacks any person after twenty years of age, the cure is difficult: but when after forty, a cure is hardly to be expected. If the fit continues only for a short space, and returns seldom, there is reason to hope; but if it continues long, and returns frequently, the prospect is bad. It is a very unfavourable symptom when the patient is seized with the fits in his sleep.

CAUSES.——The epilepsy is sometimes hereditary. It may likewise proceed from blows, bruises, or wounds on the head; a collection of water, blood, or serous humours in the brain: a polypus; tumours or concretions within the skull; excessive drinking; intense study; excess of venery; worms; teething; suppression of customary evacuations; too great emptiness or repletion; violent passions or affections of the mind, as fear, joy, &c.; hysteric affections; contagion received into the body, as the infection of the small-pox, measles, &c.

SYMPTOMS.——An epileptic fit is generally preceded by unusual weariness; pain of the head; dulness; giddiness; noise in the ears; dimness of the sight; palpitation of the heart; disturbed sleep; difficult breathing; the bowels are inflated with wind; the urine is in great quantity, but thin; the complexion is pale; the extremities are cold; and the patient often feels, as it were, a stream of cold air ascending towards his head.

In the fit, the patient generally makes an unusual noise; his thumbs are drawn in towards the palms of the hands; his eyes are distorted; he starts, and foams at the mouth; his extremities are bent or twisted various ways; he often discharges his seed, urine, and fæces, involuntarily; and is quite destitute of all sense and reason. After the fit is over, his senses gradually return, and he complains of a kind of stupor, weariness, and pain of his head; but as no remembrance of what happened to him during the fit.

The fits are sometimes excited by violent affections of the mind, a debauch of liquor, excessive heat, cold, or the like.

This disease, from the difficulty of investigating its causes and its strange symptoms, was formerly attributed to the wrath of the gods, or the agency of evil spirits. In modern times it has often, by the vulgar, been imputed to witchcraft and fascination. It depends however as much upon natural causes as any other malady; and its cure may often be effected by persisting in the use of proper means.

REGIMEN.——Epileptic patients ought, if possible, to breathe a pure and free air. Their diet should be light but nourishing. They ought to drink nothing strong, to avoid swine's flesh, water-fowl, and likewise all windy and oily vegetables, as cabbage, nuts, &c. They ought to keep themselves cheerful, carefully guarding against all violent passions, as anger, fear, excessive joy, and the like.

Exercise is likewise of great use; but the patient must be careful to avoid all extremes either of heat or cold; all dangerous situations, as standing upon precipices, riding, deep waters, and such like.

MEDICINE.——The intentions of cure must vary according to the case of the disease. If the patient be of a sanguine temperament, and there be reason to fear an obstruction in the brain, bleeding and other evacuations will be necessary. When the disease is occasioned by the stoppage of customary evacuations, these, if possible, must be restored; if this cannot be done, others may be substituted in their place. Issues or setons in this case have often a very good effect. When there is reason to believe that the disease proceeds from worms, asafœtida and proper medicines must be used to kill or carry off these vermin. When the disease proceeds from teething, the body should be kept open by emollient clysters, the feet frequently bathed in warm water, and, if the fits prove obstinate, a blistering-plaster may be put between the shoulders. The same method is to be followed when epileptic fits precede the eruption of the small-pox, or measles, &c.

When the disease is hereditary, or proceeds from a wrong formation of the brain, a cure is not to be expected. When it is owing to a debility, or too great an irritability of the nervous system, such medicines as tend to brace and strengthen the nerves may be used, as the Peruvian bark, and iron; or the anti-epileptic electuaries, recommended by Fuller and Mead, as directed in the Appendix.

The flowers of zinc have of late been highly extolled for the cure of the epilepsy. Though this medicine will not be found to answer the expectations which have been raised concerning it, yet in obstinate epileptic cases it deserves trial. The dose is from one to three or four grains, which may be taken either in pills or a bolus, as the patient inclines. The best method is to begin with a single grain four or five times a-day; and gradually to increase the dose as far as the patient can bear it. I have known this medicine, when duly persisted in, prove beneficial. Half a drachm to a drachm of cardamine flowers, or ladies smock, given thrice a-day, is sometimes of use.

Musk also has sometimes been found to succeed in the epilepsy. Ten or twelve grains of it, with the same quantity of red sulphurated quicksilver, may be made up into a bolus, and taken every night and morning.

Sometimes the epilepsy has been cured by electricity.

That the patient may not injure himself during the violence of his struggles in the paroxysm, he should be immediately placed on a bed, his clothing every where loosened, and the head moderately elevated. Some substance should be introduced and held between the teeth, to prevent their closing on the tongue. His drink should not be offered even in the interval of the convulsion in any glass or other fragile substance, lest, from the sudden return of the spasmodic affection, he may get the broken fragments within his mouth. Should it happen that the patient has been drinking too freely of spiritous liquors, or has loaded his stomach with indigestible and offensive matters, get as soon as may be a pretty strong emetic into the stomach: when that is cleared of its injurious contents, the convulsion subside.

Convulsive-fits proceed from the same causes, and must be treated in the same manner, as the epilepsy.

This is one particular species of convulsion-fits which commonly goes by the name of St. Vitu's dance, wherein the patient is agitated with strange motions and gesticulations, which by the common people are generally believed to be the effect of witchcraft. Bleed if the patient is plethoric: in almost all cases the patient should be repeatedly purged with pill of aloes with colocynth; and afterwards using the medicines perscribed above for the epilepsy, viz. the Peruvian bark and snake-root, &c. Chalybeate waters are found to be beneficial in this case. The cold bath is likewise of singular service, and ought never to be neglected when the patient can bear it.

The works of Peter Andrew Matthiolus, the commentator on the celebrated writings of Dioscorides, were printed at Prague anno 1548 and 1562; a Latin edition was printed at Venice in 1565, containing nearly 1400 figures of roots, plants, trees, &c. An elegant edition, entitled "Matthioli Compendium de Plantis," issued from the same press in the year 1571, "for the benefit of students." That small quarto contains nearly a thousand figures, reduced in size, but considerably improved from those of the folio edition: to a print of the Quercini visci is subjoined, as well as to the rest, an account of its virtues. He says, "The mistletoe of the oak (as the best), made into powder, and given in drink to those who have the falling-sickness, doth assuredly heal them;" he had tried and healed many; "but it is fit to use it forty days together."

In 1598, about twenty years after the death of Matthiolus, a splendid edition of the works of Dioscorides was printed in folio, containing upwards of 1400 prints, with the notes of Matthiolus; it was published by Gaspar Bauhinus, who was deemed by Boerhaave "a most learned botanist:" this author (Bauhinus) annexed the botanical Materia Medica, or an account of all the simples employed in the practice of physic both by Dioscorides and his commentator; thence also it appears that Matthiolus directed for the cure of the epilepsy, as already mentioned, "Quercini visci lignum intenuissimum puluerum redactum & diebus quadraginta potum."

The same year our countryman Gerard published his Herbal; he says, "the mistletoe of the oak, far from being poisonous, as some have asserted, is used in medicine against the falling sickness."

Soon after Gerard had inscribed his botanical work to Sir William Cecial, afterwards Lord Burleigh, the best compendium of the practice of physic that, we believe, had all then appeared in our language was dedicated to that illustrious person, now "High Treasurer of England, Knight of the most noble Order of the Garter, and one of the Queen's Majestie's most honourable Privie Council," entitled, "The Method of Physick, containing the Causes, Signs, and Cures of inward Diseases in Man's Body from the Head to the Foote. Whereunto is added the Form and Rule of making Remedies and Medicines which our Physicians commonly use at this Day, with the Order, Quantity, and Names of each Medicine. By Philip Barrough;" by some asserted to have been great grand-father to the late learned Dr. Isaac Barrough.

This author recommends for the cure "of the falling-sicknesse a lohoch of fine white sugar and oile of sweet almonds commixed with the miscle of the oke and (powder of) unicorne's horn. Also" (after the manner of Galen he directs) "hang about the child's necke roote of

piony being green, for it helpeth marvelously:—When they fall into this disease after they be past child's age,—you must open the mouth, putting in a wedge between the teeth; or with a feather dipped in oil of ireos" (or the oxymel of squills) "provoke vomiting to bring up the fleame. Also it is good to quicken the senses with ordoraments" (i. e. medicines of a pugnant smell), "dog fennel, rew, bitumen (Jew's pitch), and put into their mouth castoreum with oxymel. When they are raised you must cast in sharp clisters: their strength being refreshed, purge them with hiera galemi' (i. e. powder of guiacum with canella).—"This is the cure of a new and sharp epilepsie. To help that which is old, the patient must drinke water a long time, or very small ale, unless any thing forbid it. Let bloud in the veine of the hamme or the ring finger.—It is good to minister preparatives to extenates as sirupes of wormwood, hysope or oxymel of squills, decoction of hysope, and roots of piony, and other medicines rehearsed before. Afterwards purge with pilulæ cochiæ" (i. e. pill of aloes with colocynth), "and such as purge fleame. Also I judge stubium" (i. e. stibium, or glass of antimony) "to be of great force in this kind of disease, being used as is declared before in the fifteenth chapter. fol. 21*, which doth mightily purge the superfluous humours from the head. Also I have knowne this to help many" (epileptic persons): "Oil of Exitore, and oleum de lateribus†" (i. e. oil of bricks). "With it anoint the hinder parts of the head morning and evening warme—for many days together. And every morning and evening let him take these things; the first day of the powder of the skull of a man burned, one dram at once; and the next day of the miscle of the oke made in powder, one dram; and the third the powder of piony roots, one dram. After these three days, take these powders each day till the patient be healed, which will be fortie days."

"If this evil be engendered of melancholy, it is lawful to take the barke of dry black hellebore, beat it into fine powder, and minister one dram at once with mulsa" (i. e. water and honey sodden together) "and a little pepper to it."—(N. B. Fifteen grains to half a drachm of black hellebore are to constitutions of the present day strongly purgative).

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* In the 3d edition of this little quarto, printed by Field, 1617, treating "of the Frensie," the chapter to which Dr. Barrough refers, he says, "Matthiolus doth greatly commend stubium—I myself have proved it in this order to be most excellent as followeth: R.—Stubium grains twelve made into a very fine powder, and put it into claret wine four ounces; let it stand thirty hours, and every six houres shake it; at the thirty houres end powre it from the powder, and let him drink it with a little sugar. This does mightily purge the superfluous humours from the head." Here we have an antimonial preparation weaker indeed, but very similar to the wine of antimony, so highly and justly extolled by the late Dr. Huxham.

† These oils have long been erased from our dispensatories: the Exeter oil consisted of eight and twenty herbs, flowers, seeds, &c. boiled in wine and oil! Volatile liquor of hartshorn and oil mixed, or the liniment of ammonia, &c. are better applications in these cases.

"Also you may make pills thereof, and give them. When the sicke is purged enough, bring him to a bath; fasten cupping glasses with scarification to the sides and shoulders; again purge him with hiera galenia; after that fasten cupping glasses to the noddle of the neck; then shave the head and anoint it with juice of pucedanum" (hogs fennel) "infused in vinegar, in which ireos" (orris or flower-de-luce) "have been sodden: apply a plaster to the head of bread sodden in mulsa, adding to it bitter almons brayed, or serpillum," (wild thyme) "calamints, or mint and rew; do that three days. Minister sternutaments, masticatories and such things as do purge by the nose.—At the last employ ointments, liniments, and emplasters, which have virtue to dissolve and drive away" (discutents); "whereof you may find examples plentie in divers places"—in this Book.

The famous Riverius, physician to Lewis XIV. also prescribed a powder against convulsions, consisting of mistletoe of the oak, male-piony, native cinnabar, and, agreeably to the practice of those times, those whimsical ingredients, man's skull and elks hoof. A composition of this kind had during many years a place in the London and Edinburgh dispensatories.

The beginning of the last century, an English physician published a Treatise of the Mistletoe, and supported his opinion of its virtues both from facts and experience: he warmly recommended it as specific in epilepsies and many kinds of convulsions, alledging that where it fails it can do no harm. Accordingly it was prescribed in apoplexies and vertigoes; and, as was the custom of the antients, it was worn about the necks of children, to prevent convulsions. Nevertheless, the mistletoe had been long disregarded in medical practice, until it was lately brought again into notice by Dr. Henry Fraser, who asserts that "his own experience warrants him in declaring, that, of eleven cases of epilepsy which were treated during the years 1802, 1803, and 1804, nine were radically cured; one was fatal, and one received no benefit. He also states that by far the greater part of the mistletoe employed in the case last mentioned, was not the mistletoe of the oak, but mistletoe collected from the apple-tree." The former may be had genuine at the druggists mentioned in page 105.

"The first case in which Dr. Fraser employed the mistletoe of the oak in the cure of epilepsy was that of a gentleman in the twenty-third year of his age, who had been the subject of epilepsy from the third or fourth year of his birth. This case was hereditary, and was gradually increasing upon the patient, until it was become so considerable as to threaten his intellectual faculties with destruction. This gentleman had been under the care of many eminent practitioners at different times with various success; one while finding the violence of his paroxysms mitigated under their management, another while increased. On the 5th of March 1802, he began to use the mistletoe, by taking two scruples of the powder in a draught of camphorated emulsion twice daily; the dose was gradually increased to two drachms, and the use of this medicine was continued without intermission till the 21st day of June. The violence and frequency of the paroxysms experienced no visible abatement before the expiration of the first month from the commencement of the use of the mistletoe; but after this period they became considerably

milder; and about the middle of June he bade farewel to his almost constant but disagreeable companion.

"The subjects of Dr. F.'s second and third cases were in the prime of life, and the fits which had harrassed them for several years were in both very severe. These patients took one drachm of the powder of the VISCUS QUERCINUS twice daily for near three months, at the expiration of which time they were both completely cured. These patients were treated with the mistletoe, the latter end of 1802, and the disease had not manifested any disposition to return in either," anno 1806.

"The patient in the fourth case in which the mistletoe of the oak effected a radical cure was a delicate female, who had been the subject of epilepsy five years. Several physicians had been consulted for her relief, and consequently various medicines employed, of all which the asafœtida was the most useful. She was at last cured by the combined use of the cold bath and mistletoe.

"The fifth, sixth, and seventh cases, were two boys and a young girl. The age of the elder boy was thirteen, the younger twelve, and the girl nine years. These cases were neither hereditary nor violent, and were speedily cured by the mistletoe, after a combination of Peruvian bark and valerian had proved ineffectual.

"The eighth case was the most violent Dr. Fraser had ever witnessed. The patient apparently a robust man of thirty years of age, twenty-two of which he had been at various times the subject of epilepsy. The paroxysms in this case did not occur very frequently, nor even ever without giving warning of their approach; but, when occuring, were excessively violent and long continued. The plethoric state of the patient naturally led to the employment of the antiphlogistic plan of treatment; by a rigid perseverance in which, he was twice reduced nearly to the grave, without reaping the least benefit in his complaint. This patient continued the use of the mistletoe at stated intervals for near six months; and during this period he drank regularly, every second or third morning, half a pint of tepid water in which two or three drachms of the VITRIOLATED MAGNESIA had been previously dissolved. By persevering in this plan of treatment for the length of time before mentioned, and by studiously avoiding irregularities of living and excessive exercise, he has been fortunate enough to shake off his complaint. This case was hereditary; it was cured by the VISCUS QUERCINUS in 1804, and since manifested (in 1806) no disposition to return.

"The ninth case was similar to the fourth. The tenth and fatal case, in which the mistletoe failed, was that of an elderly lady: here the epilepsy was complicated with a paralysis of the right side. During the short time this lady used the VISCUS QUERCINUS, her attendants thought that the violence of the paroxysms was mitigated; but, upon being strongly recommended to try Bath, she went, and soon afterwards died there."

We have extended this article to a considerable length; 1st, to shew the ancient and present practice in the cure of this dreadful distemper; 2dly, to prove that, if remedies are judiciously selected, simplicity in prescription may be efficacious in the cure even of formidable maladies; 3dly, to instance that, in our eagerness to discover new, we are fre-

quently forgetful of old remedies; and, lastly, with a view to excite medical practitioners to preserve in their endeavours

To detect the hidden stores that lie
Of useful medicines in Botany.

OF THE HICCUP.

THE hiccup is a spasmodic or convulsive affection of the stomach and midriff, arising from any cause that irritates their nervous fibres.

It may proceed from excess in eating or drinking; from a hurt of the stomach; poisons; inflammations or schirrous tumours of the stomach, intestines, bladder, midriff, or the rest of the VISCERA. In gangrenes, acute and malignant fevers, a hiccup is often the forerunner of death.

When the hiccup proceeds from the use of aliment that is flatulent, or hard of digestion, a draught of generous wine, or dram of any spiritous liquor, will generally remove it. If poison be the cause, plenty of milk and oil must be drank, as has been formerly recommended. When it proceeds from an inflammation of the stomach, &c. it is very dangerous. In this case the cooling regimen ought to be strictly observed. The patient must be bled, and take frequently a few drops of the SPIRIT OF NITROUS ETHER in a cup of wine-whey. His stomach should likewise be fomented with cloths dipped in warm water, or have bladders filled with warm milk and water applied to it.

When the hiccup proceeds from a gangrene or mortification, the Peruvian bark, with other antiseptics, are the only medicines which have a chance to succeed. When it is a primary disease, and proceeds from a foul stomach, loaded either with a pituitous or a bilious humour, a gentle vomit and purge, if the patient be able to bear them, will be of service. If it arises from flatulencies, the carminative medicines directed for the heart-burn must be used.

When the hiccup proves very obstinate, recourse must be had to the most powerful aromatic and antispasmodic medicines. The principal of these is musk; fifteen or twenty grains of which may be made into a bolus, and repeated occasionally. Opiates are likewise of service; but they must be used with caution. A bit of sugar dipped in compound spirits of lavender, or the compound spirit of ammonia, may be taken frequently. External applications are sometimes also beneficial; as the compound plaster of laudanum, or cataplasms of the Venice treacle of the Edinburgh or London dispensatory, applied to the region of the stomach.

I lately attended a patient who had almost a constant hiccup for about nine weeks. It was frequently stopped by the use of musk, opium, wine, and other cordial and antispasmodic medicines, but always returned. Nothing however gave the patient so much ease as brisk small-beer. By drinking freely of this, the hiccup was often kept off for several days, which was more than could be done by the most powerful medicines. The patient was at length seized with a vomiting of blood, which soon

put an end to his life. Upon opening the body, a large schirrus tumour was found near the pylorus or right orifice of the stomach.

The hiccup may be removed by taking vinegar and water, or by a few drops of the oil of vitriol taken in mint water. It may sometimes be of service to provoke sneezing.

CRAMP OF THE STOMACH.

This disease often seizes people suddenly, is very dangerous, and requires immediate assistance. It is most incident to persons in the decline of life, especially the nervous, gouty, hysteric, and hypochondriac.

If the patient has any inclination to vomit, he ought to take some draughts of warm water, or weak camomile-tea, to cleanse his stomach. After this, if he has been costive, a laxative clyster may be given. He ought then to take laudanum. The best way of administering it is in a clyster. Sixty or seventy drops of tincture of opium may be given in a clyster of warm water. This is much more certain than laudanum given by the mouth, which is often vomited, and in some cases increases the pain and spasms in the stomach.

If the pain and cramps return with great violence, after the effects of the anodyne clyster are over, another, with an equal or larger quantity of opium, may be given; and every four or five hours a bolus, with ten or twelve grains of musk, and half a drachm of the Venice treacle.

In the mean time, the stomach ought to be fomented with cloths dipped in warm water, or bladders filled with warm milk and water should be constantly applied to it. I have often seen these produce the most happy effects. The anodyne balsam may also be rubbed on the part affected; and an anti-hysteric plaster worn upon it for some time after the cramps are removed, to prevent their return.

In very violent and lasting pains of the stomach, some blood ought to be let, unless the weakness of the patient forbids it. When the pain or cramps proceed from a suppression of the menses, bleeding is of use, and the patient may take asafœtida fifteen grains, camphor five grains, opiate confection one scruple, syrup sufficient to make a bolus; to be taken every four or six hours. If they be owing to the gout, recourse must be had to spirits, or some of the warm cordial waters; or give fifteen to thirty drops of the succinated spirit of ammonia in peppermint-water. Blistering plasters ought likewise in this case to be applied to the ankles. I have often seen violent cramps and pains of the stomach removed by covering it with a large plaster of Venice treacle.

OF THE NIGHT-MARE.

In this disease the patient, in time of sleep, imagines he feels uncommon oppression or weight about his breast or stomach, which he

can by no means shake off. He groans and sometimes cries out, though oftener he attempts to speak in vain. Sometimes he imagines himself engaged with an enemy, and, in danger of being killed, attempts to run away but finds he cannot. Sometimes he fancies himself in a house that is on fire, or that he is in danger of being drowned in a river. He often thinks that he is falling over a precipice, and the dread of being dashed to pieces suddenly awakes him.

This disorder has been supposed to proceed from too much blood; from a stagnation of blood in the brain, lungs, &c. But it is rather a nervous affection, and arises chiefly from indigestion. Hence we find that persons of weak nerves, who lead a sedentary life, and live full, are most commonly afflicted with the night-mare. Nothing tends more to produce it than heavy suppers, especially when eaten late, or the patient goes to bed soon after. Wind is likewise a very frequent cause of this disease; for which reason those who are afflicted with it ought to avoid all flatulent food, and having the belly in a costive state. Deep thought, anxiety, or any thing that oppresses the mind, ought also to be avoided.

As persons afflicted with the night-mare generally moan, or make some noise in the fit, they should be waked, or spoken to by such as hear them, as the uneasiness generally goes off as soon as the patient is awake. Dr. Whytt says, he generally found a dram of brandy, taken at bed-time, prevent this disease. That however is a bad custom, and in time loses its effect. We would rather have the patient depend upon the use of food of easy digestion, cheerfulness, exercise through the day, and a light supper taken early, than to accustom himself to drams. A glass of peppermint water will often promote digestion as much as a glass of brandy, and is much safer. After a person of weak digestion, however, has eaten flatulent food, a dram may be necessary; in this case we would recommend it as the most proper medicine.

Persons who are young, and full of blood, if troubled with the night-mare, ought to take a cathartic frequently, and use a spare diet.

OF SWOONINGS

People of weak nerves or delicate constitutions, are liable to swooning or fainting fits. These indeed are seldom dangerous when duly attended to; but when wholly neglected, or improperly treated, they often prove hurtful, and sometimes fatal.

The general causes of swoonings are, sudden transition from cold to heat; breathing air that is deprived of its proper spring or elasticity; great fatigue; excessive weakness; loss of blood; long fastings; fear, grief, and other violent passions or affections of the mind.

It is well known, that persons who have been long exposed to cold, often faint or fall into a swoon upon coming into the house, especially if they drink hot liquor, or sit near a large fire. This might easily be prevented by people taking care not to go into a warm room immediately after they have been exposed to the cold air, to approach the fire gradually, and not to eat or drink any thing hot till the body has been gradually brought into a warm temperature.

When any one, in consequence of neglecting these precautions, falls into a swoon, he ought immediately to be removed to a cooler apartment, to have ligatures applied above his knees and elbows, and to have his hands and face sprinkled with vinegar or cold water. He should likewise be made to smell to vinegar, and should have a spoonful or two of water, if he can swallow, with about a third part of vinegar mixed with it, poured into his mouth. If these should not remove the complaint, it will be necessary to bleed the patient, and afterwards to give him a clyster.

As air that is breathed frequently loses its elasticity or spring, it is no wonder if persons who respire in it often fall into a swoon or fainting fit. They are in this case deprived of the very principle of life. Hence it is that fainting fits are so frequent in all crowded assemblies, especially in hot seasons. Such fits however must be considered as a kind of temporary death; and, to the weak and delicate, they sometimes prove fatal. They ought therefore with the utmost care to be guarded against. The method of doing this is obvious. Let assembly-rooms, and all other places of public resort, be large and well ventilated; and let the weak and delicate avoid such places, particularly in warm seasons.

A person who faints in such a situation ought immediately to be carried into the open air; his temples should be rubbed with strong vinegar or brandy, and volatile spirits or salts held to his nose. He should be laid upon his back with his head low, and have a little wine, or some other cordial, as soon as he is able to swallow it, poured into his mouth. If the person has been subject to hysteric fits, castor or asafœtida should be applied to the nose, or burnt feathers, horn, or leather, &c.

When fainting fits proceed from mere weakness or exhaustion, which is often the case after great fatigue, long fasting, loss of blood, or the like, the patient must be supported with generous cordials, as jellies, wines, spiritous liquors, and such like. These however must be given at first in very small quantities, and increased gradually as the patient is able to bear them. He ought to be allowed to lie quite still and easy upon his back, with his head low, and should have fresh air admitted into his chamber. His food should consist of nourishing broths, sago-gruel with wine, new milk, and other things of a light and cordial nature. These things are to be given out of the fit. All that can be done in the fit is, to let him smell to a bottle of Hungary-water, eau de luce (i. e. succinated spirit of ammonia), or volatile liquor of hartshorn; and to rub his temples with warm brandy, or to lay a compress dipped in it to the pit of the stomach.

In fainting fits that proceed from fear, grief, or other violent passions or affections of the mind, the patient must be very cautiously managed. He should be suffered to remain at rest, and only made to smell some vinegar. After he is come to himself, he may drink freely of warm lemonade, or balm-tea, with some orange or lemon-peel in it. It will likewise be proper, if the fainting fits have been long and severe, to clean the bowels by throwing in an emollient clyster.

It is common in fainting fits, from whatever cause they proceed, to bleed the patient. This practice may be very proper in strong persons of a full habit; but in those who are weak and delicate, or subject to nervous disorders, it is dangerous. The proper method with such peo-

le is, to expose them to the free air, and to use cordial and stimulating medicines, as volatile salts, Hungary-water, spirits of lavender, tincture of castor, and the like.

OF FLATULENCIES, OR WIND.

All nervous patients, without exception, are afflicted with wind or flatulencies in the stomach and bowels, which arise chiefly from the want of tone or vigour in these organs. Crude flatulent aliment, as green pease, beans, coleworts, cabbages, and such like, may increase this complaint; but strong and healthy people are seldom troubled with wind, unless they either overload their stomachs, or drink liquors that are in a fermenting state, and consequently full of elastic air. While therefore the matter of flatulence proceeds from our aliments, the cause which makes air separate from them in such quantity as to occasion complaints is almost always a fault of the bowels themselves, which are too weak either to prevent the production of elastic air, or to expel it after it is produced.

To relieve this complaint, such medicines ought to be used as have a tendency to expel wind, and, by strengthening the alimentary canal, to prevent its being produced there.

Many nervous people find great benefit from eating a dry biscuit, especially when the stomach is empty. I look upon this as one of the best carminative medicines; and would recommend it in all complaints of the stomach arising from flatulence, indigestion, &c.

The list of medicines for expelling wind is very numerous; they often however disappoint the expectations of both the physician and his patient. The most celebrated among the class of carminatives are juniper-berries; the roots of ginger and zedoary; the seeds of anise, caraway, and coriander; gum-asafetida and opium; the warm waters, tinctures, and spirits, as the aromatic water, the tincture of asafetida, compound spirit of ammonia, æther, &c.

Dr. Whytt says, he found no medicine more efficacious in expelling wind than æther and laudanum. He generally gave laudanum in a mixture with peppermint water and tincture of castor, or spirit of nitrous æther. Sometimes, in place of this, he gave opium in pills with asafetida. He observes that the good effects of opiates are equally conspicuous, whether the flatulence be contained in the stomach or intestines; whereas those warm medicines, commonly called carminatives; do not often give immediate relief, except when the wind is in the stomach.

With regard to æther, the Doctor says, he has often seen very good effects from it in flatulent complaints, where other medicines failed. The dose is a tea-spoonful mixed with two table-spoonfuls of water. In gouty cases he observes, that æther, a glass of French brandy, or of the aromatic water, or ginger, either taken in substance or infused in boiling water, are among the best medicines for expelling wind.

When the case of flatulent patients is such as makes it improper to give them warm medicines inwardly, the Dr. recommends external applications, which are sometimes of advantage. Equal parts of the antihysteric and stomach plaster may be spread upon a piece of soft leather of such a size as to cover the greater part of the belly. This should be

kept on for a considerable time, provided the patient be able to bear it: if it should cause great uneasiness, it may be taken off, and the following liniment used in its stead:

Take of Bates's anodyne balsam, or tincture of soap with opium, an ounce; of the expressed oil of mace half an ounce; oil of mint two drachms. Let these ingredients be mixed together, and about a table-spoonful well rubbed on the parts at bed-time.

For strengthening the stomach and bowels, and consequently for lessening the production of flatulence, the Doctor recommends the Peruvian bark, bitters, chalybeates, and exercise. In flatulent cases, he thinks some nutmeg or ginger should be added to the tincture of cinchona and bitters, and that the aromatic powder should be joined with the filings of iron.

When windy complaints are attended with costiveness, which is often the case, few things will be found to answer better than four or five of the following pills taken every night at bed-time:

Take of asafœtida two drachms; succotrine aloes, vitriolated iron, and powdered ginger, of each one drachm; as much of the compound tincture of aloes as will be sufficient to form them into pills.

On the other hand, when the body is too open, twelve or fifteen grains of rhubarb, with half a drachm or two scruples of the confection of catechu given every other evening, will have very good effects.

In those flatulent complaints which come on about the time the menses cease, repeated small bleedings often give more relief than any other remedy.

With regard to diet, the Doctor observes, that tea, and likewise all flatulent aliments, are to be avoided; and that for drink, water with a little brandy or rum is not only preferable to malt liquor, but in most cases also to wine.

As Dr. Whytt has paid great attention to this subject, and as his sentiments upon it in a great measure agree with mine, I have taken the liberty to adopt them; and shall only add to his observations, that exercise is in my opinion superior to all medicine, both for preventing the production and likewise for expelling of flatulencies. These effects however, are not to be expected from sauntering about, or lolling in a carriage; but from labour, or such active amusements as give exercise to every part of the body.

In Portugal, asafœtida is a favourite remedy in flatulent complaints.

OF LOW SPIRITS.

All who have weak nerves are subject to low spirits in a greater or less degree. Generous diet, the cold bath, exercise, and amusements, are the most likely means to remove this complaint. It is greatly increased by solitude and indulging gloomy ideas, but may often be relieved by cheerful company and sprightly amusements.

When the low spirits are owing to a weak and relaxed state of the stomach and bowels, an infusion of the Peruvian bark with cinnamon or nutmeg will be proper. Steel joined with aromatics may likewise in this case be used with advantage; but riding and a proper diet, are most to be depended on.

When they arise from a foulness of the stomach and intestines, or obstruction in the hypochondriac viscera, aloetic purges will be proper. I have sometimes known the Harrogate sulphur-water of service in this case.

When the low spirits proceed from a suppression of the menstrual or of the haemorrhoidal flux, these evacuations may either be restored, or some others substituted in their place, as issues, setons, or the like. Dr. Whytt observes, that nothing has such sudden good effects in this case as bleeding.

When low spirits have been brought on by long-continued grief, anxiety, or other distress of mind, agreeable company, variety of amusements, and change of place, especially travelling into foreign countries, will afford the most certain relief.

Persons afflicted with low spirits should avoid all kinds of excess, especially of venery and strong liquors. The moderate use of wine and other strong liquors is by no means hurtful; but when taken to excess they weaken the stomach, vitiate the humours, and depress the spirits. This caution is the more necessary, as the unfortunate and melancholy often fly to strong liquors for relief, by which means they never fail to precipitate their own destruction.

OF HYSTERIC AFFECTIONS.

These likewise belong to the numerous tribe of nervous diseases, which may be justly reckoned the reproach of medicine. Women of a delicate habit, whose stomach and intestines are relaxed, and whose nervous system is extremely sensible, are most subject to hysteric complaints. In such persons an hysteric fit, as it is called, may be brought on by an irritation of the nerves of the stomach or intestines, by wind, acrid humour, or the like. A sudden suppression of the menses often gives rise to hysteric fits. They may likewise be excited by violent passions or affections of the mind, as fear, grief, anger, or great disappointments.

Sometimes the hysteric fit resembles a swoon or fainting fit, during which the patient lies as in a sleep, only the breathing is so low as scarcely to be perceived. At other times the patient is affected with catchings and strong convulsions. The symptoms which precede hysteric fits are likewise various in different persons. Sometimes the fits come on with coldness of the extremities, yawning and stretching, lowness of spirits, oppression and anxiety. At other times the approach of the fit is foretold by a feeling, as if there were a ball at the lower part of the belly, which gradually rises toward the stomach, where it occasions inflation, sickness, and sometimes vomiting; afterwards it rises into the gullet, and occasions a degree of suffocation, to which quick breathing, palpitation of the heart, giddiness of the head, dimness of the sight, loss of hearing, with convulsive motions of the extremities and other parts of the body, succeed. The hysteric paroxysm is often introduced by an immoderate fit of laughter, and sometimes it goes off by crying. Indeed there is not much difference between the laughing and weeping of an highly hysteric lady.

Our aim in the treatment of this disease must be to shorten the fit or paroxysm when present, and to prevent its return. The longer the fits continue, and the more frequently they return, the disease becomes the

more obstinate. Their strength is increased by habit, and they induce so great a relaxation of the system, that it is with difficultly removed.

It is customary, during the hysteric fit or paroxysm, to bleed the patient. In strong persons of a plethoric habit, and where the pulse is full, this may be proper; but in weak and delicate constitutions, or where the disease has been of long standing, or arises from inanition, is it not safe. The best course in such cases is to rouse the patient by strong smells, as burnt feathers, asafœtida, or the volatile liquor of hartshorn, held to the nose. Hot bricks may be also applied to the soles of the feet, and the legs, arms, and belly, may be strongly rubbed with a warm cloth. But the best application is to put the feet and legs into warm water. This is peculiarly proper when the fits precede the flow of the menses. In case of Costiveness, a laxative clyster with asafœtida will be proper; and as soon as the patient can swallow, two table-spoonfuls of a solution of asafœtida, or of some cordial julep, may be given.

The radical cure of this disorder will be best attempted at a time when the patient is most free from the fits. It will be greatly promoted by a proper attention to diet. A milk and vegetable diet, when duly persisted in, will often perform a cure. If however the patient has been accustomed to a more generous diet, it will not be safe to leave it off all at once, but by degrees. The most proper drink is water with a small quantity of spirits. A cool dry air is the best. Cold bathing, and every thing that braces the nerves and invigorates the system, is beneficial; but lying too long in bed, or whatever relaxes the body, is hurtful. It is of the greatest importance to have the mind kept constantly easy and cheerful, and, if possible, to have it always engaged in some agreeable and interesting pursuit.

The proper medicines are those which strengthen the alimentary canal and the whole nervous system, as the preparations of iron, the Peruvian bark, and other bitters. Twenty drops of the elixir of vitriol, in a cup of the infusion of the bark, may be taken twice or thrice a-day. The bark and iron may likewise be taken in substance, provided the stomach can bear them; but they are generally given in too small doses to have any effect. The chalybeate waters generally prove beneficial in this disorder.

If the stomach is loaded with phlegm, vomits will be of use; but they should not be too strong, nor frequently repeated, as they tend to relax and weaken the stomach. If there be a tendency to costiveness, it must be removed either by diet, or by taking an opening pill as often as it shall be found necessary: a few grains of pill of myrrh and aloes may be taken for that purpose.

To lessen the irritability of the system, antispasmodic medicines will be of use. The best antispasmodic medicines are musk, opium, and castor. When opium disagrees with the stomach, it may either be applied externally, or given in clysters. It is often successful in removing those periodical head-achs to which hysteric and hypochondriac patients are subject. Castor has in some cases been found to procure sleep where opium failed; for which reason Dr. Whytt advises that they should be joined together. He likewise recommends the anti-hysteric plaster to be applied to the ABDOMEN, which, with tonic and corroborating medicines, will probably be of great service to the patient.

Hysteric women are often afflicted with cramps in various parts of the body, which are most apt to seize them in bed, or when asleep. The most efficacious medicines in this case are opium, blistering-plasters, and warm bathing or fomentations. When the cramp or spasm is very violent, opium is the remedy most to be depended on. In milder cases, immersing the feet and legs in warm water, or applying a blistering-plaster to the part affected, will often be sufficient to remove the complaint. In patients whose nerves are uncommonly delicate and sensible, it will be better to omit the blistering-plaster, and to attempt the cure by opiates, musk, camphor, and the warm bath.

Cramps are often prevented or cured by compression. Thus cramps in the legs are prevented, and sometimes removed, by tight bandages; and when convulsions arise from a flatulent distention of the intestines, or from spasms beginning in them, they may be often lessened or cured by making a pretty strong compression upon the ABDOMEN by means of a broad belt. A roll of brimstone held in the hand is frequently used as a remedy for cramps. Though this seems to owe its effect chiefly to imagination, yet, as it sometimes succeeds, it merits a trial. When spasms or convulsive motions arise from sharp humours in the stomach or intestines, no lasting relief can be procured till these are either corrected or expelled. The CINCHONA has sometimes cured periodic convulsions after other medicines had failed.

Some persons afflicted with cramps pretend to reap great benefit from small bundles of rosemary tied all night about their feet, ankles, and knees. We have no doubt that bathing the feet and legs in a warm and pretty strong decoction of rosemary will in general prove beneficial to the patient.

OF HYPOCHONDRIAC AFFECTIONS.

THIS disease generally attacks the indolent, the luxurious, the unfortunate, and the studious. It becomes daily more common in this country, owing, no doubt, to the increase of luxury and sedentary employments. It has so near a resemblance to the immediately preceding, that many authors consider them as the same disease, and treat them accordingly. They require, however, a very different regimen; and the symptoms of the latter, though less violent, are more permanent than those of the former.

Men of a melancholy temperament, whose minds are capable of great attention, and whose passions are not easily moved, are, in the advanced periods of life, most liable to this disease. It is usually brought on by long and serious attention to abstruse subjects, grief, the suppression of customary evacuations, excess of venery, the repulsion of cutaneous eruptions, long continued evacuations, obstructions in some of the viscera, as the liver, spleen, &c.

Hypochondriac persons ought never to fast long, and their food should be solid and nourishing. All acescent and windy vegetables are to be avoided. Flesh meats agree best with them, and their drink should be old claret or good madeira. Should these disagree with the stomach, water with a little brandy or rum may be drank.

Cheerfulness and serenity of mind are by all means to be cultivated.

Exercise of every kind is useful. The cold bath is likewise beneficial; and where it does not agree with the patient, frictions with the flesh-brush or a coarse cloth may be tried. If the patient has it in his power, he ought to travel either by sea or land. A voyage or a long journey, especially towards a warmer climate, will be of more service than any medicine.

The general intentions of cure, in this disease, are to strengthen the alimentary canal, and to promote the secretions. These intentions will be best answered by the different preparations of iron and the Peruvian bark, which, after proper evacuations, may be taken in the same manner as directed in the preceding disease.

If the patient be costive, it will be necessary to make use of some gentle opening medicine, as pills composed of equal parts of aloes, rhubarb, and asafetida, with as much of the elixir proprietatis as is necessary to form the ingredients into pills. Two, three, or four of these may be taken as often as it shall be found needful to keep the body gently open. Such as cannot bear the asafetida may substitute Spanish soap in its place.

Though a cheerful glass may have good effects in this disease, yet all manner of excess is hurtful. Intense study, and every thing that depresses the spirits, are likewise pernicious.

Though the general symptoms and treatment of nervous disorders were pointed out in the beginning of this chapter; yet, for the benefit of the unhappy persons afflicted with those obstinate and complicated maladies, I have treated several of their capital symptoms under distinct or separate heads. These however are not to be considered as different diseases, but as various modifications of the same disease. They all arise from the same general causes, and require nearly the same method of treatment. There are many other symptoms that merit particular attention, which the nature of my plan will not permit me to treat of at full length. I shall therefore omit them altogether, and conclude this chapter with a few general remarks on the most obvious means of preventing or avoiding nervous disorders.

In all persons afflicted with nervous disorders, there is a great delicacy and sensibility of the whole system, and an uncommon degree of weakness of the organs of digestion. These may be either natural or acquired. When owing to a defect in the constitution, they are hardly to be removed, but may be mitigated by proper care. When induced by diseases, as long or repeated fevers, profuse hæmorrhages, or the like, they prove also very obstinate, and will yield only to a course of regimen calculated to restore and invigorate the habit.

But nervous affections arise more frequently from causes which it is in a great measure in our own power to avoid, than from diseases, or an original fault in the constitution, &c. Excessive grief, intense study, improper diet, and neglect of exercise, are the great sources of this extensive class of diseases.

It has been already observed, that grief indulged destroys the appetite and digestion, depresses the spirits, and induces an universal relaxation and debility of the whole system. Instances of this are daily to be seen. The loss of a near relation, or any other misfortune in life, is often sufficient to occasion the most complicated series of nervous symptoms.

Such misfortunes indeed are not to be avoided, but surely their effects, by a vigorous and proper exertion of the mind, might be rendered less hurtful. For directions in this matter we must refer the reader to the article GRIEF, in the chapter on the Passions.

The effects of intense study are pretty similar to those occasioned by grief. It preys upon the animal spirits, and destroys the appetite and digestion. To prevent these effects, studious persons ought, according to the Poet, to toy with books. They should never study too long at a time; nor attend long to one particular subject, especially if it be of a serious nature. They ought likewise to be attentive to their posture, and should take care frequently to unbend their minds by music, diversions, or going into agreeable company.

With regard to diet, I shall only observe, that nervous diseases may be induced either by excess or inanition. Both of these extremes hurt the digestion and vitiate the humours. When Nature is oppressed with fresh loads of food, before she has had time to digest and assimilate the former meal, her powers are weakened, and the vessels are filled with crude humours. On the other hand, when the food is not sufficiently nourishing, or is taken too seldom, the bowels are inflated with wind, and the humours, for want of regular fresh supplies of wholesome chyle, are vitiated. These extremes are therefore with equal care to be avoided. They both tend to induce a relaxation and debility of the nervous system, with all its dreadful train of consequences.

But the most general cause of nervous disorders is indolence. The active and laborious are seldom troubled with them. They are reserved for the children of ease and affluence, who generally feel their keenest force. All we shall say to such persons is, that the means of prevention and cure are both in their own power. If the constitution of human nature be such, that man must either labour or suffer diseases, surely no individual has any right to expect an exemption from the general rule.

Those however who are willing to take exercise, but whose occupations confine them to the house, and perhaps to an unfavourable posture, really deserve our pity. We have in a former part of the book endeavoured to lay down rules for their conduct; and shall only add, that where these cannot be complied with, their place may in some measure, be supplied by the use of bracing and strengthening medicines, as the Peruvian bark, with other bitters; the preparations of iron; the elixir of vitriol, and such like.

Dr. Wurtzer, a German physician, has observed that the distilled water of the lauro-cerasus (PRUNUS LAURO-CERASUS) diminishes the too great irritability of the heart and muscular fibres, and augments at the same time the action of the absorbent vessels. He lately employed, with complete success, this water, in doses of fifty drops, repeated three times a-day, in a case of hypochondriasis. If this character of the laurel-water be well founded, it promises to be a valuable remedy as a palliative, at least, in organic affections of the heart, but especially in nervous palpitations of that organ.

CHAP. XLIV.

DISORDERS OF THE SENSES.

WE do not mean to treat of the nature of our sensations, or to give a minute description of the various organs by which they are performed; but to point out some of the diseases to which these organs are most liable, and to shew how they may be prevented or remedied.

OF THE EYE.

No organ of the body is subject to more diseases than the eye, nor is there any one of which the diseases are more difficult to cure. Though more ignorant persons pretend to cure these than any other class of diseases, yet a very superficial acquaintance with the structure of the eye and nature of vision will be sufficient to convince any one of the danger of trusting to them. These diseases often exceed the skill of the most learned physician; hence we may easily infer the danger of trusting them to ignorant quacks, who, without all peradventure, put out more eyes than they cure. But, though the diseases of the eye can seldom be cured, they might often, by due care, be prevented; and, even where the sight is totally lost, many things might be done which are generally neglected, to render the unhappy person both more useful to himself and to society.

It is a pity those who have the misfortune to be born blind, or who lose their sight when young, should be suffered to remain in ignorance or to beg. This is both cruelty and want of economy. There are many employments of which blind persons are very capable, as knitting, carding, turning a weel, teaching languages, &c. Nor are instances wanting of persons who have arrived at the highest pitch of learning, without having the least idea of light. Witness the late famous Nicholas Sanderson of Cambridge, and the late excellent poet Dr. Thomas Blacklock of Edinburgh. The former was one of the first mathematicians of his age, and the latter, besides being a good poet and philosopher, was master of all the learned languages, and a very considerable adept in the liberal arts.

The eyes are hurt by viewing bright or luminous objects; keeping the head too long in a hanging posture; violent head-achs; excessive venery; the long use of bitters; the effluvia from acrid or volatile substances; various diseases; as the small-pox, measles, &c. but, above all, from night-watching, and candle-light studies. Long fasting is likewise hurtful to the eyes, and frequent heats and colds are no less pernicious. The eyes are often hurt by the stoppage of customary evacuations; as morning sweats; sweating of the feet; the menses in women; and the bleeding piles in men. All kinds of excess are likewise hurtful to the sight, particularly the immoderate use of ardent spirits and other strong liquors.

In all diseases of the eyes, especially those attended with inflammation, the cool regimen ought to be observed. The patient must abstain from all spirituous liquors. The smoke of tobacco, smoky rooms, the vapours of onions and garlic, and all vivid lights and glaring colours are carefully to be avoided. The drink may be water, whey, or small beer; and the aliment must be light and of easy digestion.

For preventing disorders of the eyes, issues and setons are of prime use. Every person, whose eyes are tender, ought to have one or more of these in some part of the body. It will likewise be of use to keep the body gently open, and either to bleed or purge spring and fall. All excess and night studies are to be avoided. Such as do not chuse a seton or an issue, will reap benefit from wearing a small Burgundy-pitch plaster between their shoulders.

A gutta serena or amaurosis, is an abolition of the sight without any apparent cause or fault in the eyes. When it is owing to a decay or wasting of the optic nerve, it does not admit of a cure; but when it proceeds from a compression of the nerves by redundant humours, these may in some measure be drained off, and the patient relieved. For this purpose, the body must be kept open with the laxative mercurial pills. If the patient be young and of a sanguine habit, he may be bled. Cupping, with scarifications on the back part of the head, will likewise be of use. A running at the nose may be promoted by volatile salts and stimulating powders, as compound powder of asarabacca, &c. But the most likely means of relieving the patient are issues or blisters kept open for a long time on the back part of the head, behind the ears, or on the neck. I have known these restore sight, even after it had been for a considerable time lost.

Should these fail, recourse must be had to a mercurial salivation; or what will perhaps answer the purpose better, twelve grains of muriated quicksilver (the corrosive sublimate of mercury) may be dissolved in an English pint and a half of brandy, and a table-spoonful of it taken twice a-day, drinking half a pint of the decoction of sarsaparilla after it.

A cataract is an obstruction of the pupil, by the interposition of some opaque substance, which either diminishes or totally extinguishes the sight. It is generally an opacity of the crystalline humour. In a recent or beginning cataract, the same medicines are to be used as in the gutta serena: and they will sometimes succeed. But when this does not happen, and the cataract becomes firm, it must be couched, or rather extracted. I have resolved a recent cataract by giving the patient frequent purges with calomel, keeping a poultice of fresh hemlock constantly upon the eye, and a perpetual blister on the neck. In both these cases may not electricity merit a trial?

The myopia or short-sightedness, and the presbyopia, or seeing only at too great a distance, are disorders which depend on the original structure or figure of the eye, therefore admit of no cure. The inconveniences arising from them may however be, in some measure, remedied by the help of proper glasses. The former requires the aid of a concave, and the latter of a convex glass.

A strabismus, or squinting, depends upon an irregular contraction of the muscles of the eye from a spasm, palsy, epilepsy, or an ill habit. Children often contract this disorder by having their eyes unequally ex-

posed to the light. They may likewise acquire it by imitation from a squinting nurse or play-fellow, &c. As this disorder can hardly be cured, parents ought to be careful to prevent it. Almost the only thing which can be done for it is to contrive a mask for the child to wear, which will only permit him to see in a straight direction.

Squinting, according to the observations of that acute anatomist Mr Home, appears to rise from the vision in one eye being obscure. It may however be acquired by children who have the lenses of their eyes of different focuses; or have one eye less perfect in its vision than the other; living constantly with those who do squint, and by imitation acquiring a habit of neglecting to use one eye.

The power of squinting voluntarily may also be acquired at any age. Persons who look much through telescopes are led to apply the mind entirely to one eye, not seeing at all with the other. In this case the neglected eye will at first, from habit, follow the other; but in time, if frequently neglected, may lose this restraint, and be moved in another direction. Some astronomers, whose eyes have been much used in this way, are said to be able to squint at pleasure.

From this view of squinting, it takes place under the three following circumstances; where one eye has only an indistinct vision; where both eyes are capable of seeing objects, but the one less perfect in itself than the other; and where the muscles of one eye have acquired from practice a power of moving it independently of the other.

Where squinting arises from an absolute imperfection in the eye, there can be no cure.

Where it arises from weakness only in the sight of one eye, it may, in some instances, be got the better of; but to effect the cure there is only one mode, which is that of confining the person to the use of the weak eye by covering the other; in this way the muscles, from constant use, will become perfect in the habit of directing the eye upon the object, gain strength in that action, and acquire a power of adjusting the eye: when these are established in a sufficient degree, the other eye may be set at liberty. The time that will be necessary for the cure must depend on the degree of weakness of the sight, and the length of time the muscles have been left to themselves; for it is with difficulty they acquire an increased degree of action after having been long habituated to a more limited contraction.

Since a small deviation in the direction of either eye from the axis of vision may produce squinting, it is worthy of notice that this unsightly habit may be acquired by infants who have not any defect in the eyes, but may arise from the cradle in which they lay being so situated with respect to the light, as to attract their notice in one particular direction, so much as to occasion a cast of one eye.

Spots or specks on the eyes are generally the effect of inflammation, and often appear after the small-pox, the measles, or violent ophthalmias. They are very difficult to cure, and often occasion total blindness. If the specks are soft and thin, they may sometimes be taken off by gentle caustics and discutients; as vitriol, the juice of selandine, &c. When these do not succeed, a surgical operation may be tried: the success of this however is always very doubtful.

We read in the book of Tobit in the Apocrypha (chap. vi. and

chap. xi), "As for the gall" (of a fish) "it is good to anoint a man who hath whiteness in his eyes, and he shall be healed;—the gall being straked into the eyes of Tobias, his eyes began to smart, and he rubbed them, and the whiteness pilled away from the corners of his eyes: then Tobias saw his son, and he fell upon his neck."—A watchmaker at Paris having heard that the gall of a barbel was the remedy which Tobias employed, resolved to try its effects on his mother-in-law, a widow in her fifty-third year, whose eyes had for six months been afflicted with ulcers, and covered with film, which rendered them totally blind. He squeezed the gall of that fish into a phial, and in the evening he rubbed it with the end of a feather into his mother's eyes. It gave her great pain for half an hour, which abated by degrees, and her eyes watered very much. Next morning she could not open them, the water as it were gluing her eyes up. He bathed them with pure water, and she began to see with the eye which had received the most liquor. He used the gall again in the evening: the inflammation dispersed; the white of her eyes became red, their colour returned by degrees, and her sight was thus restored. In short, she recovered her sight without any other remedy.

The blood-shot eye may be occasioned by a stroke, a fall, retching, vomiting, violent coughing, &c. I have frequently known it happen to children in the hooping-cough. It appears at first like a bit of scarlet, and is afterwards of a livid or blackish colour. This disorder generally goes off without medicine. Should it prove obstinate, the patient may be bled, and have his eyes fomented with a decoction of comfrey roots and elder flowers. A soft poultice may be applied to the eyes; and the body should be kept open by gentle purgatives.

The WATERY or WEEPING EYE is often the mark of a scrophulous habit, is generally occasioned by a relaxation or weakness of the glandular parts of that organ. These may be braced and strengthened by bathing the eye with brandy and water, Hungary-water, rosewater with white vitriol dissolved in it, &c. Medicines which make a revulsion are likewise proper; as mild purgatives, perpetual blisters on the neck, bathing the feet frequently in lukewarm water, &c.

When this disease proceeds from an obstruction of the lachrymal duct, or natural passage of the tears, it is called a fistula lachrymalis, and can only be cured by a surgical operation.

OF THE EAR.

THE functions of the ear may be injured by wounds, ulcers or any thing that hurts its fabric. The hearing may likewise be hurt by excessive noise; violent colds in the head; fevers; hard wax or other substances sticking in the cavity of the ear; too great a degree of moisture or dryness of the ear. Deafness is very often the effect of old age, and is incident to most people in the decline of life. Sometimes it is owing to an original fault in the stricture or formation of the ear itself. When this is the case, it admits of no cure; and the unhappy person not only continues deaf, but generally likewise dumb, for life.

When deafness is the effect of wounds or ulcers of the ears, or of old age, it is not easily removed. When it proceeds from cold of the head, the patient must be careful to keep his head warm, especially in the

night; he should likewise take some gentle purges, and keep his feet warm, and bath them frequently in lukewarm water at bed-time. When deafness is the effect of a fever, it generally goes off after the patient recovers. If it proceeds from dry wax sticking in the ears, it may be softened by dropping oil into them; afterwards they must be syringed with warm milk and water.

If deafness proceeds from dryness of the ears, which may be known by looking into them, half an ounce of the oil of sweet almonds, and the same quantity of the compound soap liniment, commonly called liquid opodeldoc, or the tincture of asafœtida, may be mixed together. Or take oil of almonds three drachms, water of ammonia one drachm; mix them for use. A few drops of this or the former mixture may be put into the ear every night at bed-time, stopping them afterwards with a little wool or cotton. Sneezing powders may then be serviceable. Some, instead of oil, put a small slice of the fat of bacon into each ear, which we have known to answer the purpose very well. When the ears abound with moisture, it may be drained off by an issue or seton, which should be made as near the affected parts as possible.

Some, for the cure of deafness, recommend the gall of an eel mixed with spirit of wine, to be dropped into the ear; others, equal parts of Hungary-water and spirits of lavender. Etmuller extols amber and musk; and Brookes says, he has often known hardness of hearing cured by putting a grain or two of musk into the ear with cotton-wool. But these and other applications must be varied according to the cause of the disorder.

Though such applications may sometimes be of service, yet they much oftener fail. Neither the eyes nor ears ought to be tampered with; they are tender organs, and require a very delicate touch. For this reason, what we would chiefly recommend in deafness is, to keep the head warm. From whatever cause the disorder proceeds, this is always proper; and perhaps more benefit is derived from it alone, in the most obstinate cases of deafness, than from all the medicines usually employed for the cure of deafness.

Dr. Horsely, well known fifty years ago in the northern counties for his success in expelling the various species of worms from the human body, lived to a great age: he frequently washed his ears with his own urine, poured warm from a proper vessel; putting in them every night and morning during the latter years of his life, a bit of wool well moistened with the same fluid. Dr. Horsley frequently recommended this practice to others, and the Editor has often known it restore the secretion to the auditory organs, after the patient had long been without it. We have seen some instances of deafness cured, and also a few instances of aged persons recovering their hearing by electricity, wearing salt in their ears for a fortnight or three weeks. Perhaps a strong watery solution of salt merits a preference.

In cases of simple puriform discharge from the tympanum of the ear, weak injections, either of vitriolated zinc or of acetated ceruse, are beneficial; and in aid of topical applications, blisters and even setons can never be injurious, but they may often conduce to the cure.

OF THE TASTE AND SMELL.

THOUGH these senses are not of so great importance to man in a state of society as the sight and hearing, yet as the loss of them is attended with some inconveniency, they deserve our notice. They are seldom to be restored when lost; which ought to make us very attentive to their preservation, by carefully avoiding whatever may in the least prove injurious to them. As there is a very great affinity between the organs of tasting and smelling, whatever hurts the one generally affects the other.

Luxury is highly injurious to these organs. When the nose and palate are frequently stimulated by fragrant and poignant dishes, they soon loose the power of distinguishing tastes and odours with any degree of nicety. Man, in a state of nature, may perhaps have these faculties as acute as any other animal.

The sense of smelling may be diminished or destroyed by diseases; as, the moisture, dryness, inflammation or suppuration of that membrane which lines the inside of the nose, commonly called the olfactory membrane; the compression of the nerves which supply this membrane, or some fault in the brain itself at their origin. A defect, or too great a degree of solidity, of the small spungy bones of the upper jaw, the caverns of the forehead; &c. may likewise impair the sense of smelling. It may also be injured by a collection of fœtid matter in those caverns, which keeps constantly exhaling from them. Few things are more hurtful to the sense of smelling than taking great quantities of snuff.

When the nose abounds with moisture, after gentle evacuations, such things as tend to take off irritation, and coagulate the thin sharp serum, may be applied; as the oil of anise mixed with fine flour; camphor dissolved in oil of almonds, &c. The vapours of amber, frankincense, gum mastic, and benjamin, may likewise be received into the nose and mouth.

For moistening the mucus when it is too dry, some recommend snuff made of the leaves of marjoram, mixed with the oil of amber, marjoram, and aniseed; or a sternutatory of calcined white vitriol, twelve grains of which may be mixed with two ounces of marjoram-water, and filtrated. The stream or vapour of vinegar upon hot iron received up the nostrils is likewise of use for softening the mucus, opening obstructions, &c.

If there is an ulcer in the nose, it ought to be dressed with some emollient ointment, to which, if the pain be very great, a little tincture of opium (laudanum) may be added. If it be a venereal ulcer, it is not to be cured without mercury. In that case, the solution of the corrosive sublimate in brandy may be taken, as directed in the gutta serena. The ulcer ought likewise to be washed with it; and the fumes of cinnabar may be received up the nostrils.

If there be reason to suspect that the nerves which supply the organs of smelling are inert, or want stimulating, volatile salts, strong snuffs, and other things which occasion sneezing, may be applied to the nose. The forehead may likewise be anointed with balsam of Peru, to which may be added a little of the oil of amber.

The taste may be diminished by crusts, filth, mucus, aphthæ, pel-

licles, warts, &c. covering the tongue; it may be depraved by a fault of the saliva, which being discharged into the mouth, gives the same sensations as if the food which the person takes had really a bad taste; or it may be entirely destroyed by injuries done to the nerves of the tongue and palate. Few things prove more hurtful either to the sense of tasting or smelling than obstinate colds, especially those which affect the head.

When the taste is diminished by filth, mucus, &c. the tongue ought to be scraped, and frequently washed with a mixture of water, vinegar, and honey, or some other detergent. When the saliva is vitiated, which seldom happens unless in fevers or other diseases, the curing of the disorder is the cure of this symptom. To relieve it however in the mean time, the following things may be of use: if there be a bitter taste, it may be taken away by vomits, purges, and other things which evacuate bile. What is called a nidorous taste, arising from putrid humours, is corrected by the juice of citrons, oranges, and other acids. A salt taste is cured by plentiful dilution with watery liquors. An acid taste is destroyed by absorbents, and alkaline salts, as powder of oyster-shells, lime-water, or a solution of salt of tartar or prepared kali.

When the sensibility of the nerves which supply the organs of taste is diminished, the chewing of horse-radish, or other stimulating substances, will help to recover it.

OF THE TOUCH.

The sense of touching may be hurt by any thing that obstructs the nervous influence, or prevents it being regularly conveyed to the organs of touching; as pressure, extreme cold, &c. It may likewise be hurt by too great a degree of sensibility, when the nerve is not sufficiently covered by the cuticle or scarf-skin, or where there is too great a tension of it, or it is too delicate. Whatever disorders the functions of the brain and nerves, hurts the sense of touching. Hence it appears to proceed from the same general causes as palsy and apoplexy, and requires nearly the same method of treatment.

In a stupor, or defect of touching, which arises from an obstruction of the cutaneous nerves, the patient must first be purged; afterwards such medicines as excite the action of the nerves, or stimulate the system, may be used. For this purpose, the volatile liquor of harts-horn, compound spirit of ammonia, horse-radish, &c. may be taken inwardly; the disordered parts at the same time may be frequently rubbed with fresh nettles, or water of ammonia, commonly called spirit of sal ammoniac. Blistering-plasters, and sinapisms applied to the parts, will likewise be of use, as also warm bathing, especially in the natural hot baths.

CHAP. XLV.

OF A SCHIRRUS AND CANCER.

A SCHIRRUS is a hard indolent tumour usually seated in some of the glands; as the breasts, the arm-pits, &c. If the tumor becomes large, unequal, of a livid, blackish, or leaden colour, and is attended with violent pain, it gets the name of an occult cancer. When the skin is broken, and a sanies or ichorous matter of an abominable fetid smell is discharged from the sore, it is called an open or ulcerated cancer. Persons after the age of forty-five, particularly women, and those who lead an indolent sedentary life, are most subject to this disease.

CAUSES.——This disease is often owing to suppressed evacuations; hence it proves so frequently fatal to women of a gross habit, particularly old maids and widows, about the time when the menstrual flux ceases. It may likewise be occasioned by excessive fear, grief, anger, religious melancholy, or any of the depressing passions. Hence the unfortunate, the choleric, and those persons who devote themselves to a religious life in convents or monasteries, are often afflicted with it. It may also be occasioned by the long continued use of food that is too hard of digestion, or of an acrid nature; by barrenness; celibacy; cold; blow; friction; pressure; or the like. Women often suffer from the last of these by means of their stays, which squeeze and compress their breast so as to occasion great mischief. Sometimes the disease is owing to an hereditary disposition.

SYMPTOMS.——This disorder seems often very trifling at the beginning. A hard tumor about the size of an hazel nut, or perhaps smaller, is generally the first symptom. This will often continue for a long time without seeming to increase, or giving the patient great uneasiness; but if the constitution be hurt, or the tumor irritated by pressure or improper treatment of any kind, it begins to extend itself towards the neighbouring parts by pushing out a kind of roots or limbs. It then gets the name of CANCER, from a fancied resemblance between these limbs and the claws of a crab. The colour of the skin begins to change, which is first red, afterwards purple, then bluish, livid, and at last black. The patient complains of heat, with a burning, gnawing, shooting pain. The tumor is very hard, rough, and unequal, with a protuberance, or rising, in the middle; its size increases daily, and the neighbouring veins become thick, knotty, and of a blackish colour.

The skin at length gives way, and a thin sharp ichor begins to flow, which corrodes the neighbouring parts till it forms a large unsightly ulcer. More occult cancers arise, and communicate with the neighbouring glands. The pain and stench become intolerable; the appetite fails; the strength is much exhausted by a continual hectic fever; at last a violent hæmorrhage, or discharge of blood, from some part

of the body, with faintings, or convulsion fits, generally put an end to the miserable patient's life.

REGIMEN.——The diet ought to be light, but nourishing. All strong liquors, and high-seasoned or salted provisions, are to be avoided. The patient may take as much exercise as he can easily bear, and should use every method to divert thought, and amuse his fancy. All kinds of external injury are carefully to be guarded against, particularly of the affected part, which ought to be defended from all pressure, and even from the external air, by covering it with fur or soft flannel.

MEDICINE.——This is one of those diseases for which no certain remedy is yet known. Its progress however may sometimes be retarded, and some of its most disagreeable symptoms mitigated, by proper applications. One misfortune attending the disease is, that the unhappy patient often conceals it too long. Were proper means used in due time, a cancer might often be cured; but after the disorder has arrived at a certain height, it generally sets all medicines at defiance.

When a schirrous tumour is first discovered, the patient ought to observe a proper regimen, and to take twice or thrice a-week a dose of the common purging quicksilver (i. e. mercurial) pills. Some blood may also be let, by the occasional application of leeches to or near the part affected; and it may be gently rubbed twice a-day with a little of the ointment of quicksilver, and kept warm with fur or flannel. The food must be light, and an English pint of the decoction of woods or sarsaparilla may be drank daily. I have sometimes discussed hard tumours, which had the appearance of being cancers, by a course of this kind.

So also has a milk diet; and small doses of calomel and hemlock, as a quarter of a grain of the former with four grains of the inspissated juice of hemlock, may be taken every six hours: the dose of the latter may be gradually but cautiously increased; and the patient may drink three half pints of the following mixture in the course of the day: Three pints of the compound decoction of sarsaparilla, and one pint of lime-water; let them be mixed.

Should the tumor however not yield to this treatment, but on the contrary, become larger and harder, it will be proper to extirpate it, either by the knife or caustic. Indeed whenever this can be done with safety, the sooner it is done the better. It can answer no purpose to extirpate a cancer after the constitution is ruined, or the whole mass of humours corrupted by it. This however is the common way, which makes the operation so seldom succeed. Few people will submit to the extirpation till death stares them in the face; whereas, if it were done early, the patient's life would not be endangered by the operation, and it would generally prove a radical cure.

When the cancer is so situated that it cannot be cut off, or if the patient will not submit to the operation, such medicines as will mitigate to relieve the most urgent symptoms may be used. Dr. Home says, that half a grain of muriated quicksilver (the corrosive sublimate of mercury) dissolved in a proper quantity of brandy, and taken night and morning, will often be of service in cancers of the face and nose. He likewise recommends an infusion of the solanum, or nightshade, in cancers of the breasts.

But the medicine most in repute at present for this disease is hem-

lock. Dr. Stork, physician at Vienna, has of late recommended the extract of this plant as very efficatious in cancers of every kind. The Doctor says, he has given some hundred weights of it without ever hurting any body, and often with manifest advantage. He advises the patient however to begin with very small doses, as two or three grains, and to increase the dose gradually till some good effect be perceived, and there to rest without further increase. From two or three grains at first, the doctor says he has increased the dose to two, three, or four drachms a-day, and finds that such doses may be continued for several weeks without any bad consequences.

The regimen which the doctor recommends during the use of the medicine, is to avoid farinaceous substances not fermented, and too acrid aromatics. He says, good wine will not be hurtful to those who are accustomed to it, nor a moderate use of acids ; and adds, that the patient should live in a pure free air, and keep his mind as quiet and cheerful as possible.

The doctor does not pretend to fix the time in which a cancer may be resolved by the use of hemlock, but says he has given it for above two years in large doses without any apparent benefit; nevertheless the patient has been cured by persisting in the use of it for half a year longer. This is at least encouragement to give it a fair trial. Though we are far form thinking the hemlock merits those extravagant encomiums which the Doctor has bestowed upon it, yet, in a disease which has so long baffled the boasted powers of medicine, we think it ought always to be tried.

The powder of hemlock is by some preferred to the extract, or inspissated juice. They are both made of the fresh leaves, and may be used nearly in the same manner. The dose of the powder may be gradually increased from a few grains to half a drachm, and nearly four drachms of it have been given in the day with remarkably good effects. The hemlock may also be used externally either as a poultice or fomentation. The sore may likewise be kept clean by injecting daily a strong decoction of the tops and leaves into it.

Few things contribute more to the healing of foul sordid ulcers of any kind than keeping them thoroughly clean. This ought never to be neglected. The best application for this purpose seems to be the carrot poultice. The root of the common carrot may be grated, and moistened with as much water as will bring it to the consistence of a poultice or cataplasm. This must be applied to the sore, and renewed twice a-day: previously to its application, the deep ulcers may be washed to the bottom by means of a syringe with a strong infusion of cinchona, or a decoction of carrots; and the patient should take, four or five times a-day, a glass of good wine, with half a drachm of powdered Peruvian bark in it. The sores, after being washed, should be sprinkled with the same powder, or with red nitrated quicksilver. This process cleans the sore, generally assuages the pain, and suppresses the disagreeable smell; which are objects of no small importance in a loathsome and dreadful disorder.

Pure air ought to have free access during the day to the apartments of the patient; they may also be purified with the muriatic acid vapour, by putting a pound of common salt into an earthen vessel, and pouring over it, from time to time, a small quantity of vitriolic acid, till the whole of the salt is moistened. The earthen dish, thus filled with salt, &c. may be placed in a corner, and requires no

attention. If the air is foul, and peculiarly offensive, or if the apartments to be ventilated are spacious, the vessel may be placed in heated sand, to extricate a larger quantity of vapour.—The same process is effectual in correcting the insalubrious or mephitic air of privies.

Wort, or an infusion of malt, has been recommended not only as a proper drink, but as a powerful medicine in this disease. It must be frequently made fresh, and the patient may take it at pleasure. Two, three, or even four English pints of it may be drank every day for a considerable time. No benefit can be expected from any medicine in this disease, unless it be persisted in for a long time. It is of too obstinate a nature to be soon removed; and, when it admits of a cure at all, it must be brought about by inducing an almost total change of the habit, which must always be a work of time. Setons or issues in the neighbourhood of the cancer have sometimes good effects.

Arsenic has been administered internally with evident advantage, for some time; it has also been employed externally as a lotion, made by boiling one ounce of white arsenic in four pints of water to three pints, the liquor, when cold, being filtered through paper by means of a glass funnel: but we do not recommend that deleterious drug to the use of Domestic practitioners: when it is resorted to, it ought to be given under the direction of more than ordinary medical skill and experience. It is however with satisfaction that we recommend to the notice of our readers, a safe, new, and apparently valuable remedy, that has been employed by Mr. Carmichael, a surgeon in Dublin, for certain species of ulcers that have hitherto proved very difficult of cure. Cancerous sores of the nose, of the upper eye-lid, on the scrotum, and on the calf of the leg, are said to have been successfully treated, by giving twelve grains, gradually increased to doses of a scruple (formed into pills of five grains each), of the carbonate or rust of iron, every four or six hours: the sores were sprinkled with levigated rust of iron. Or an ointment may be compounded of equal parts of the carbonate of iron and hog's lard; this may be rubbed in near the sore, that the absorbent vessels may convey it to the diseased part.

When medicines fail to cure this direful disease, recourse must be had to opium, or the inspissated juice of henbane: these will not, indeed, cure the disease; but they will abate pain, and, by soothing the anguish of the sufferer, render life tolerable, while the all-wise and supreme Disposer of Events shall be pleased to continue it.

To avoid this dreadful disorder, people ought to use wholesome food; to take sufficient exercise in the open air; to be as easy and cheerful as possible; and carefully to guard against all blows, bruises, and every kind of pressure upon the breasts, or other glandular parts.

CHAP. XLVI.

OF POISONS.

EVERY person ought, in some measure, to be acquainted with the nature and cure of poisons. They are generally taken unawares, and their effects are often so sudden and violent, as not to admit of delay, or allow time to procure the assistance of physicians. Happily indeed no great degree of medical knowledge is here necessary; the remedies for most poisons being generally at hand, or easily obtained, and nothing but common prudence needful in the application of them.

The cure of all poisons taken into the stomach, without exception, depends chiefly on discharging them as soon as possible; it is seldom, indeed, that poison remains long in the stomach before it occasions sickness, with an inclination to vomit. If any thing has been taken into the stomach which endangers life, it ought to be immediately discharged: were this duly regarded, the danger arising from poisons, as well as other indigestible matters, might generally be avoided. The methods of prevention are obvious, and the means are easily obtained.

Poisons either belong to the mineral, the vegetable, or the animal kingdom.

Mineral poisons are commonly of an acrid or corrosive quality; as arsenic, muriated quicksilver, &c. They are generally of a narcotic or stupefactive quality; as opium, hemlock, henbane, berries of the deadly night-shade, &c.

Poisonous animals communicate their infection either by bite or sting. This poison is very different from the former, and only produces its effects when received into the body by a wound.

MINERAL POISONS.----------Arsenic is the most common of this class; and, as the whole of them are pretty similar both in their effects and method of cure, what is said with respect to it will be applicable to every other species of corrosive poison.

When a person has taken arsenic, he soon proceives a burning heat and a violent pricking pain in his stomach and bowels, with an intolerable thirst, and an inclination to vomit. The tongue and throat feel rough and dry; and, if proper means be not soon administered, the patient is seized with great anxiety, hiccuping, faintings, and coldness of the extremities. To these succeed black vomits, fœtid stools, with a mortification of the stomach and intestines, which are the immediate forerunners of death.

On the first appearance of these symptoms the patient should drink large quantities of new milk and salad oil till he vomits; or he may drink warm water mixed with oil. Fat broths are likewise proper, provided they can be got ready in time. Where no oil is to be had, fresh butter may be melted and mixed with the milk or water. These things are to be drank as long as the inclination to vomit continues. Some have drank eight or ten English quarts before the vomiting ceased; and it is never safe to leave off drinking while one particle of the poison remains in the stomach.

These oily or fat substances not only provoke vomiting, but like-

wise blunt the acrimony of the poison, and prevent its wounding the bowels; but if they should not make the person vomit, half a drachm or two scruples of the powder of ipecacuanha must be given, or a few spoonfuls of the oxymel or vinegar of squills may be mixed with the water which he drinks. Vomiting may likewise be excited by tickling the inside of the throat with a feather.

Should these methods fail, after a short trial (for delay is in this case very dangerous), give twenty grains or more of vitriolated zinc; or dissolve five or six grains of tartarized antimony in twelve table spoonfuls of water: let half the mixture be taken directly, and two table-spoonfuls more every five minutes, until vomiting is excited.

Let the patient then take a drachm of sulphurated kali dissolved in a pint of warm water; or, if this cannot be procured, dissolve two drachms of prepared kali, or salt of tartar, in a pint of water: let the patient drink of this solution, every quarter of an hour, as much as he can.

If tormenting pains are felt in the lower belly, and there is reason to fear that the poison has got down to the intestines, besides the drinks above mentioned, clysters of milk and oil must be very frequently thrown up; and the patient must drink emollient decoctions of barley, oatmeal, marsh-mallows, and such like. He must likewise take an infusion of senna and manna, a solution of vitriolated natron (i. e. Glauber's salts), or of vitriolated magnesia.

The acetate of copper, or verdigrease, is a culinary poison, that, when recently swallowed, may be obviated by emetics, and afterwards the solution of kali ought to be drank in abundance: the flowers of sulphur taken freely are beneficial. The solution of sulphurated kali mo-rates the ill effects of this as well as of all other mineral poisons. The deleterious effects of muriated quicksilver (corrosive sublimate) are counteracted by sulphurated kali, or the alkaline solution already mentioned. Common salt dissolved in water readily precipitates the quicksilver, and thereby greatly abates its virulence. This article being always ready, it ought to be resorted to where the sulphurated kali, or the salt of tartar, cannot be obtained. Acids however, even of the mildest kind, increase the pain and danger occasioned by an overdose of this preparation of quicksilver.

After the poison has been evacuated, the patient ought for some time to abstain from flesh and all strong liquors, and to live upon milk, broth, gruel, light puddings, and upon other spoon-meats of easy digestion. His drink should be barley-water, or infusions of any of the mild mucilaginous vegetables.

VEGETABLE POISONS, besides heat and pain of the stomach, commonly occasion some degree of giddiness, and often a kind of stupidity and folly. Though, when allowed to remain in the stomach, they often prove fatal, yet the danger is generally over as soon as they are discharged. But although they are less apt to erode or inflame the bowels than mineral substances, no time ought to be lost gin having them discharged.

Opium, being frequently taken by mistake, merits particular attention. It is used as a medicine both in a liquid and solid form, and is, indeed, an inestimable drug when taken in a proper quantity; but an over-dose proves a strong poison, generally occasioning great, drowsiness, with stupor, and other apoplectic symptoms. Every method should be tried to keep the patient awake. He should be tossed,

shaked, and moved about. Vomiting should be excited by giving spearmint-water and oxymel of squills of each an ounce, and half a scruple of ipecacuanha. Should the symptoms continue violent, recourse must be had to blood-letting. Sharp blistering-plasters should be applied to the legs and arms; stimulating medicines, as salt of hartshorn, or volatile liquor of hartshorn, &c. should be held under the nose, to produce a salutary degree of irritation. The patient may drink freely of lemonade; or of the alkaline solution with lemon juice, commonly called the saline mixture; or, if these cannot be procured, of vinegar diluted with water. In this manner the poisonous effects of hemlock, &c. may be obviated. If the body should remain weak and languid after the poison has been discharged, nourishing diet and cordials will be proper; but when there is reason to fear that the stomach or bowels are inflamed, the greatest circumspection is necessary both with regard to food and medicine.

We cannot close this subject without observing that arsenic may be externally applied without detriment; but the deleterious effects of this semi-metallic concrete taken internally, where it does not prove immediately fatal, seem to be different from those of other poisons. A person after having taken an excessive dose of arsenic, although he survive the misfortune, may remain a victim to its virulent and destructive tendency.

A man remarkable for his athletic powers, and who previously to his accidentally swallowing this poison, had enjoyed good health for ten years, in the autumn after this misfortune was attacked with obstructions of the liver, which, left him in a state of paralysis during the winter. His teeth, which had been remarkable for their whiteness, became incrusted with a black scale, and he was subject to the jaundice three or four times every year.

To detect guilt, as well as to dissipate groundless suspecion, we shall mention one of the most simple and efficacious means of detecting the presence of arsenic; it consists in infusing a portion of the suspected matter in a solution of vegetable alkali (i. e. salt of tartar). After standing an hour or two, pour upon it a solution of sulphate of copper (blue vitriol): if any arsenic was present, the copper will be immediately converted into an elegant green, and will soon be precipitated. In this way, water, or the contents of a stomach supposed to contain arsenic, may be examined.

OF THE BITES OF POISONOUS ANIMALS.

We shall begin with the bite of a mad dog, as it is both the most common and dangerous animal poison in this country.

The creatures naturally liable to contract this disease are, as far as we yet know, all of the dog kind, viz. foxes, dogs, and wolves. Hence it is called the rabies canina, or dog-madness. Of the last we have none in this island; and it so seldom happens that any person is bit by the first that they scarce deserve to be taken notice of. If such a thing should happen, the method of treatment is precisely the same as for the bite of a mad dog.

The symptoms of madness in a dog are as follow: At first he looks dull, shews an aversion to food and company: he does not bark as

usual, but seems to murmur, is peevish, and apt to bite strangers; is ears and tail droop more than usual, and he appears drowsy: afterwards he begins to loll out his tongue, and froth at the mouth, his eye seeming heavy and watery: he now, if not confined, takes off, runs panting along with a kind of dejected air, and endeavours to bite every one he meets. Other dogs are said to fly from him. Some think this a certain sign of madness, supposing that they know him by the smell; but it is not to be depended on. If he escapes being killed, he seldom runs above two or three days, till he dies exhausted with heat, hunger, and fatigue.

This disease is most frequent after long, dry, hot seasons; and such dogs as live upon putrid stinking carrion, without having enough of fresh-water, are most liable to it. Yet it does not appear that madness is more frequent in warm than in cold climates; nay, in the island of Antigua, where the climate is very hot, and the water very scarce, this distemper, it is said, has never been observed; and dogs are known to have subsisted on putrid aliment for a long time without any detriment. For these reasons, we think the canine fever arises from a specific contagion like the small-pox or measles among the human race, which, being one produced by causes unknown, continues to be propagated by the intercourse dogs have with each other; as the diseases just mentioned continue to be propagated among the human race by means of their reciprocal intercourse.

When any person has been bit by a dog, the strictest enquiry ought to be made whether the animal was really mad. Many disagreeable consequences arise from neglecting to ascertain this point. Some people have lived in continual anxiety for many years, because they had been bit by a dog which they believed to be mad; but, as he had been killed on the spot, it was impossible to ascertain the fact. This should induce us, instead of killing a dog the moment he has bit any person, to do all in our power to keep him alive, at least till we can be certain whether he be mad or not.

Many circumstances may contribute to make people imagine a dog mad. He loses his master, runs about in quest of him, is set upon by other dogs, and perhaps by men. The creature, thus frightened, beat, and abused, looks wild, and lolls out his tongue as he runs along. Immediately a crowd is after him; while he, finding himself closely pursued, and taking every one he meets for an enemy, naturally attempts to bite him in self-defence. He soon gets knocked on the head, and it passes currently that he was mad, as it is then impossible to prove the contrary.

This being the true history of, by far, the greater part of those dogs which pass for mad, is it any wonder that numberless whimsical medicines have been extolled for preventing the effects of their bite? This readily accounts for the great variety of infallible remedies for the bite of a mad dog, which are to be met with in almost every family. Though not one in a thousand has any claim to merit, yet they are all supported by numberless vouchers. No wonder that imaginary diseases should be cured by imaginary remedies. In this way, credulous people first impose upon themselves, and then deceive others. The same medicine which was supposed to prevent the effects of the bite when the dog was not mad, is recommended to a person who has had the misfortune to be bit by a dog that was really mad. He takes it, trusts to it, and is undone.

From the days of Galen to the present time, mankind have never been without some boasted specific, which has been held forth as an infallible remedy for the prevention and cure of the canine phrensy, till fatal experience demonstrated their inefficacy. To a reliance on the Ormskirk medicine, as it is called, many persons have doubtless fallen victims; for what can be effected as a preservative from this formidable disease by a compound like the following? for such, after analysing the "Ormskirk medicine," Dr. Lewis and Heysham inform us it consists of, viz. half an ounce of chalk, three drachms of armenian bole, ten grains of alum, one drachm of alecampane in powder mix them all together, and add six drops of oil of anise." The efficacy of the medicine, if indeed it ever did prove efficacious, must depend on some unknown, undetected ingredient.

This poison is generally communicated by a wound, which nevertheless mostly heals as soon as a common wound: but afterwards it begins to feel painful, and, as the pain spreads towards the neighbouring parts, the person becomes heavy and listless. His sleep generally becomes unquiet; he sighs, looks dull, prefers solitude, and is troubled, with nausea. These are the forerunners, or rather the first symptoms of that dreadful disease occasioned by the bite of a mad dog. But as we do not propose to treat fully of the disease itself, but to point out the method of preventing it, we shall not take up time in shewing its progress from the first invasion to its commonly fatal termination

The common notion, that this poison may lie in the body for many years, and afterwards prove fatal, is both hurtful and ridiculous. It must render such persons as have had the misfortune to be bit very unhappy, and can have no good effects. If the person takes proper medicines for forty days after the time of his being bit, and feels no symptoms of the disease, there is reason to believe him out of danger.

Sometimes the characteristic symptom of this virulent disorder, the dread of water, suddenly attacks the patient, and every attempt to swallow liquids is accompanied with the most convulsive and painful sensations. This appears to be a circumstance peculiar to the human race; for mad animals do not, as some have supposed, evince the least dread of water. There is not the least doubt that the disease is occasioned by the saliva of the mad creature being mixed with the human blood. Unless, therefore, part of the true skin be injured by the bite of a rabid animal, the poison will not be communicated; but, in the contrary case, the smallest quantity is sufficient to produce the fatal effect. Hence if the cuticle has been wounded, it is absolutely necessary to remove the surrounding muscular substance by the knife, and to lose no time in submitting to this operation, as it is the only certain and effectual preventive. It is, however, of consequence previously to be convinced whether the animal has been actually mad; though it is affirmed by creditable writers, that the bite of creatures that were neither diseased nor raving, nay even the bite of healthy dogs, has been productive of hydrophobia.

As it is generally allowed that canine madness, if the dread of water has once taken place, can seldom be cured, the most essential part of the treatment consists in the speady application of preventives: for this reason, we have already stated the immediate necessity of cutting away the part contiguous to the wound, especially where that

operation can be performed without injuring any large blood-vessel. Besides this precaution, the wound should be frequently washed by a tooth-brush or sponge, with soap and water, salt and water, salt and vinegar, or by pouring cold water upon it from a considerable height; and, to prevent the canine virus from remaining about the wounded part, it should be kept open, and a discharge promoted from it for several weeks, by drawing and stimulating ointments; nay, should it be our lot to meet with a misfortune so much to be dreaded, we would not hesitate, after cleansing the the wound by some of the methods above-mentioned, to apply a cupping glass three or four times, and after drawing blood by scarification, and applying, during a few hours, a cataplasm formed of common salt slightly moistened with water, renewed every two hours, we would lay on linen cloths saturated with the decoction of arsenic mentioned in the chapter on Cancer (p. 299), dissolving in each ounce of that liquor half a drachm of strained opium. This being done during twenty-four hours, the wound being wiped dry with lint, two drachms of the stronger ointment of quicksilver should be rubbed into it, and the part covered with a blistering-plaster somewhat larger than the wound.

As soon as a bladder is perceived to have risen under the plaster, puncture the blister, let out the lymph, and, in order to promote a discharge, dress it daily for the space of several weeks with an ointment composed of equal parts of the ointment or of the plaster of cantharides and the stronger ointment of quicksilver, melted together by a very gentle heat. Let a drachm of the latter be rubbed into the parts about the wound, or into the forepart of the legs of the patient, every other night; meanwhile, if he is plethoric, bleed, Vomit with a dose of three to six grains of vitriolated quicksilver, and every night at bed-time give the following medicine: Camphor five grains, purified opium and vitriolated quicksilver of each one grain and a half, tartarized antimony half a grain, conserve of roses enough to form these into a bolus. To promote perspiration, let him take from time to time, during the night, four table-spoonfuls of the following sudorific: Camphorated mixture eight ounces, water of acetated ammonia four ounces. Twice or thrice a-day for many weeks he may take powder of Virginian snake-root twenty grains, cinchona half a drachm, ginger six grains; mix, and take it with a gass of generous wine.

Camphor may also be given in the following manner: Take purified nitre half an ounce, Virginian snake-root two drachms, camphor one drachm; rub them together in a mortar, and divide them into ten doses; one of them to be taken daily, or oftener. The following is likewise a good antispasmodic medicine: Take of Virginian snake-root in powder half a drachm, gum asafœtida twelve grains, gum camphor seven grains; make these into a bolus with a little syrup of saffron: to be taken as above.

Good vinegar, which is employed as an useful addition to drink in inflammatory fevers (in the proportion of an ounce or two to a quart), as a medicine in putrid diseases, and to correct the effects of narcotic poisons, is likewise in this case of considerable service, and should be taken freely either in the patient's food or drink.

During the use of the mercurial ointment, the patient must keep within doors, and take nothing cold.

This course having been persisted in for three or four weeks, he must take a saline cathartic or two, and wait a few days till the effect of the mercury is gone off. He should then bathe in the sea or in a cold bath every morning for a week or ten days: both the bathing, and the use of the powder of cinchona with snake-root, and ginger, should be repeated three or four times previously to the next full and the changes of the moon, for at least three months. If he feel chilly or cold for a long time after coming out of the cold bath, let him take the powders last mentioned with a glass of wine; or he may have a tepid bath, or the water a little warmed and less heated each time, till by degrees the cold bath excite a pleasing and healthful glow.

A proper regimen must be observed throughout the whole course, The patient should abstain from all salted and high-seasoned provisions. He must avoid strong liquors, and live mostly upon a light and rather spare diet. His mind should be kept as easy and cheerful as possible; and all excessive heat and violent passions avoided with the utmost care.

Besides excision, or the removal of the bitten part by the knife, prevention may also be attempted by the actual cautery, or by burning with gunpowder after the manner of the Indians, the action of fire being one of the most powerful that can be employed for this purpose. But since most of the preventional means hitherto made use of to obviate the most dangerous and too often fatal effects of this destructive poison sometimes fail, it may be proper to mention one, that, if resorted to immediately, or in a few hours after the bite, if the wound has only been well washed with tepid salt water, will we doubt not secure the patient from the dreadful effects of being bitten by a mad animal.

Cauterize or burn the part above the bite; and by means of a red-hot wire, knitting needle, or the prong of a fork, or any other instrument not exceeding the size of the dog's tooth, cauterize the wound to the bottom; dress and promote a discharge for a month by the mercurialized vesicatory above-mentioned; then heal the sore in the common way. Cruel as this operation may appear, the pain is momentary, and easier to the patient than by removing the part with a knife, or destroying it by caustics; and he may resort to sea-bathing, or any other means that may satisfy his own mind or those of his friends.

In a neglected case, or where the means to prevent the mischief are unsuccessfully employed, the virus of the mad animal absorbed into the system may lurk inactive in the constitution for fourteen, twenty-one, or forty days. It is observed to exert its influence the sooner in proportion as the bite is nearer to glandular parts, especially to those of the upper part of the throat and mouth, called salival. Should the wound have been healed, it begins to be affected with pain, swells, inflames, and discharges a thin, sharp fluid: this pain is considered a primary, invariable mark of beginning hydrophobia. The patient becomes dull, languid, and restless, having frightful dreams: suddenly the pains, for the most part, shoot from the place where the skin was lacerated all along up to the throat, where it causes a sense of suffocation, and generally a total inability of swallowing liquids. Instances have occurred where the sight,

nay even the noise, of falling water created the most violent agitations, and could not be borne.

These spasmodic affections of the throat, in the course of the disease, gradually diffuse themselves over the whole muscular system, similar to what happens in tetanus, or locked jaw, which disorder is principally and primarily nervous. Flying pains, tightness and oppression of the præcordia, is one of the constant symptoms of this disorder; nor is it uncommon to observe, in strong constitutions, a priapism, or even a lustful appetite exerting itself with some degree of violence. The tongue becomes dry and rough, the voice hoarse, the thirst considerable; yet they cannot drink: they vomit a bilious matter; they dislike to see a dog come into the room, or any person in scarlet apparel. A fever with great heat comes on; they start, rage, and foam at the mouth; their pulse sinks, their breath fails; cold clammy sweats, convulsions, and death, terminate the misery of the wretched sufferer.

The indications of cure are to take off the spasmodic symptoms and to throw the insidious poison out of the habit: this is to be attempted by a low diet; by bleeding freely; by vomiting with the vitriolated quicksilver; by rubbing in the ointment of quicksilver not only near the place where the bite was received, but along the spine of the back; by the use of the warm bath; by oil thrown into the body by frictions frequently repeated; by the mouth, as often and as much as can be got down, and injected by the anus in the form of a lavement; in fine, by speedily exciting a salivation by the internal and external use of the preparations of quicksilver, of which the vitriolated, for internal use, has in these cases been deemed the most useful. Take solid opium and vitriolated quicksilver of each one grain and a half to two grains, camphor three, tartarized antimony half a grain; let them be well rubed together in a glass mortar, and with conserve of roses form a bolus, to be given at bedtime. This (if the patient can take any liquid), mixed with large doses of the acetated water of ammonia (Mindererus's spirit), will act as an anodyne, sedative, and sudorific. A bolus formed of musk fifteen grains, red sulphurated quicksilver one scruple, may be given every six hours. Every morning let him have a bolus formed of musk and Russian castor of each twelve grains, vitriolated quicksilver two grains, conserve enough to mix them. The champorated mixture with the acetated water of ammonia, and wine also, should be taken freely, provided the aversion to liquids is not so strong as to render the exhibition of them impracticable. In this case, wine and vinegar should be injected up the rectum, and, when he is deprived of the power of swallowing light and nutritive food, clysters of animal broths must be injected, and sponges moistened with them may be applied to the region of the stomach. Care must be taken that the patient be so confined by means of a strait waiscoat, as to render him incapable of doing injury to himself or his attendants.

To assuage his thirst, wine and water, or negus well acidulated with vegetable acid, may be poured down his throat from the spout of a tea pot; but if his aversion to liquids is insurmountable, a sponge dipt in hot vinegar may be kept constantly to his mouth and nostrels.

Topical applications must not be neglected: after a dozen leeches have been applied to the throat, place on it a piece of thin flannel moistened three or four times a-day with the following anodyne liui-

ment: Compound soap liniment three ounces, powdered opium two drachms. mixed with a very gentle heat. Or, after rubbing in this liniment, cover the throat and neck from ear to ear with a cerate formed of asafœtida, camphor, galbanum, crude opium, and rectified oil of amber, each one drachm; beat them into a mass, and add of the weaker ointment of quicksilver enough to make a cerate.

The whole limb which contains the wound should frequently be rubbed with oil, and wrapped up in an oily flannel. If he is costive, give him oil by the mouth, or relieve him by an oily lavement. Oil should not only be administered internally, but a tepid bath of oil, or frictions with it, cannot here be too frequently used. This disease is sometimes succeeded by inflammatory symptoms, in which case we may have recourse to copious bleedings.

In Germany, the powdered root of deadly night-shade has been given every second morning to children in doses from one to five grains, and ten or fifteen grains to adults: this is reported to have proved infallible in the first stages of the malady.

Should the patient happily be recovered by having gone through the proper course of the remedies herein advised, then cold or sea bathing adapted to the powers of the constitution, with the use of the tonic and stimulant powders of cinchona, snake-root, &c. and wine, may doubtless give strength and vigor to the system debilitated by evacuants and sedatives.

The notion that this disease could not be cured, has been productive of horrid consequences. It was usual either to abandon the unhappy persons to their fate, to bleed them to death, or to suffocate them between mattresses or feather-beds: this conduct merits the severest punishment. All persons who aid or assist in wilfully causing the death of a person labouring under hydrophobia, as in other cases, are liable to be indicted, tried, and executed for murder.

The next poisonous animal which we shall mention is the VIPER. The grease of this animal rubbed into the wound is said to cure the bite. Though that is all the viper-catchers generally do when bit, we should not think it sufficient for the bite, of an enraged viper. It would surely be more safe to have the wound well sucked, and afterwards rubbed with warm salad oil. A poultice of bread and milk, softened with salad oil, should likewise be applied to the wound; and the patient ought to drink freely of the vinegar-whey, or water-gruel with vinegar in it, to make him sweat. Vinegar is one of the best medicines which can be used in any kind of poison, and ought to be taken very liberally. If the patient be sick, he may take a vomit. This course will be sufficient to cure the bite of any of the poisonous animals of this country.

The practice of sucking out poisons is very ancient; and indeed nothing can be more rational. Where the bite cannot be cut out, this is the most likely way of extracting the poison. There can be no danger in performing this office; it may safely be done even in the case of the bite of a mad-dog, as the poison does no harm unless it be taken into the body by a wound. The person who sucks the wound ought however to wash his mouth frequently with salad-oil, which will secure him from even the least inconveniency. The PSYLLI in Africa, and the MARSI in Italy, were famed for curing the bites of poisonous animals by sucking the wound; and we are told that the Indians in North America practice the same at this day.

With regard to poisonous insects, as the bee, the wasp, the hornet, &c. their stings are seldom attended with danger, unless when a person happens to be stung by a great number of them at the same time; in which case something should be done to abate the inflammation and swelling. Some, for this purpose, apply honey, oil, and volatile liquor or hartshorn; others lay pounded parsley to the part.

A mixture of vinegar and Venice treacle is likewise recommended; but rubbing the part with warm salad-oil succeeds very well. Indeed, when the stings are so numerous as to endanger the patient's life, which is sometimes the case, he must not only have oily poultices applied to the part, but should likewise be bled, and take some cooling medicines, as nitre or cream of tartar, and should drink plentifully of diluting liquors.

It is the happiness of this island to have very few poisonous animals and those which we have are by no means of the most virulent kind. We cannot however make the same observation with regard to poisonous vegetables. These abound every where, and prove often fatal to the ignorant and unwary. This indeed is chiefly owing to carelessness. Children ought early to be cautioned against eating any kind of fruit, roots, or berries, which they do not know; and all poisonous plants to which they can have access, ought, as far as possible, to be destroyed.

Seldom a year passes but we have accounts of several persons poisoned by eating hemlock roots instead of parsneps, or some kind of fungus which they had gathered for mushrooms. These examples ought to put people on their guard with respect to the former, and to put the latter entirely out of use. Mushrooms may be a delicate dish, but they are a dangerous one, as they are generally gathered by persons who do not know one kind of fungus from another, and take every thing for a mushroom which has that appearance.

It may not be amiss to observe, for the benefit of such of our countrymen as go to America, that an effectual remedy is now said to be found for the bite of the rattle-snake.—The prescription is as follows: Take of the roots of plantain and horehound, in summer, roots and branches together, a sufficient quantity; bruise them in a mortar, and squeeze out the juice, of which give, as soon as possible, one large spoonful: if the patient be swelled, you must force it down his throat. This generally will cure; but, if he finds no relief in an hour after, you may give another spoonful, which never fails.—If the roots are dried, they must be moistened with a little water. To the wound may be applied a leaf of good tobacco moistened with rum.

It is possible there may be in nature specific remedies for every kind of poison; but as we have very little faith in any of those which have yet been pretended to be discovered, we shall beg leave again to recommend the most strict attention to the following rules, viz. That when any poisonous substance has been taken into the stomach, it ought as soon as possible, to be discharged by vomits, clysters, and purges; and, when poison has been received into the body by a wound, that it be expelled by medicines which promote the different secretions, especially those of sweat, urine, and insensible perspiration; to which may be joined antispasmodics, or such medicines as take off tension and irritation; the chief of which are opium, musk, camphor, and asafœtida.

Hemlock, henbane, deadly night shade, monk's hood, and some other narcotic vegetables, under proper management become excellent remedies; but they are verulent poisons: their exhibition requires the greatest caution. When they are taken by mistake, or in an excessive dose, excite vomiting as soon as possible by emetics; evacuate the bowels by purgatives and clysters, and give largely vinegar, honey, milk, and oil.

CHAP. XLVII.

OF THE VENEREAL DISEASE.

IN the first edition of this book the venereal disease was omitted. The reasons however which at that time induced me to leave it out have upon more mature consideration vanished. Bad consequences, no doubt, may arise from ignorant persons tampering with medicine in this disorder; but the danger from that quarter seems to be more than balanced by the great and solid advantages which must arise to the patient from an early knowledge of his case, and an attention to a plan of regimen, which, if it does not cure the disease, will be sure to render it more mild, and less hurtful to the constitution.

It is peculiarly unfortunate for the unhappy persons who contract this disease, that it lies under a sort of disgrace. This renders disguise necessary, and makes the patient either conceal his disorder altogether, or apply to those who promise a sudden and secret cure, but who in fact only remove the symptoms for a time, while they fix the disease deeper in the habit. By this means a slight infection, which might have been easily removed, is often converted into an obstinate and sometimes incurable malady.

Another unfavourable circumstance attending this disease is, that it assumes a variety of different shapes, and may with more propriety be called an assemblage of diseases, than a single one. No two diseases can require a more different method of treatment than this does in its different stages. Hence the folly and danger of trusting to any particular nostrum for the cure of it. Such nostrums however are generally administered in the same manner to all who apply for them, without the least regard to the state of the disease, the constitution of the patient, the degree of infection, and a thousand other circumstances of the utmost importance.

Though the venereal disease is generally the fruit of unlawful embraces, yet it may be communicated to the innocent as well as the guilty. Infants, nurses, midwives, and married women whose husbands lead dissolute lives, are often affected with it, and frequently lose their lives by not being aware of their danger in due time. The unhappy conditions of such persons will certainly plead our excuse, if any excuse be necessary, for endeavouring to point out the symptoms and cure of this too common disease.

To inumerate all its different symptoms, however, and to trace the disease minutely through its various stages, would require a much larger space than falls to this part of my subject; I shall therefore confine my observations chiefly to circumstances of importance, omitting such as are either trifling, or which occur but seldom.

OF THE VIRULENT GONORRHŒA.

The virulent gonorrhœa is an involuntary discharge of infectious matter from the parts of generation of either sex. It generally makes its appearance within eight or ten days after the infection has been received sometimes indeed it appears in two or three days, and at other times not before the end of four or five weeks. Previous to the discharge the patient feels an itching, with a small degree of pain in the genitals. Afterwards a thin glary matter begins to distil from the urinary passage, which stains the linen, and occasions a small degree of titillation, particularly at the time of making water; this gradually increasing, arises at length to a degree of heat and pain, which are chiefly perceived about the extremity of the urinary passage, where a slight degree of redness and inflammation likewise begins to appear.

As the disorder advances, the pain, heat of the urine, and running, increase, while fresh symptoms daily ensue. In men, the erections become painful and involuntary, and are more frequent and lasting than when natural. This symptom is most troublesome when the patient is warm in bed. The pain, which was at first only perceived towards the extremity, now begins to reach all up the urinary passage, and is most intense just after the patient has done making water. The running gradually recedes from the colour of seed, grows yellow, and at length puts on the appearance of mucus.

When the disorder has arrived at its height, all the symptoms are more intense; the heat of urine is so great, that the patient dreads the making water; and though he feels a constant inclination this way, yet it is rendered with the greatest difficulty, and often only by drops: the involuntary erections now become extremely painful and frequent; there is also a pain, heat, and sense of fulness about the seat, and the running is plentiful and sharp, of a brown, greenish, and sometimes of a bloody colour.

By a proper treatment, the violence of the symptoms gradually abates; the heat of urine goes off; the involuntary and painful erections, and the heat and pain about the seat, become easier; the running also gradually discreases, grows whiter and thicker, till at last it entirely disappears.

By attending to these symptoms the gonorrhœa may be generally distinguished from any other disease. There are however some few disorders for which it may be mistaken, as an ulcer in the kidneys or bladder, and the flour albus or whites in women. But in the former of these the matter comes away only with the urine, or when the sphincter of the bladder is open; whereas in a gonorrhœa the discharge is constant. The latter is more difficult to distinguish, and must be known chiefly from its effects, as pain, and its power to communicate the infection.

REGIMEN.——When a person has reason to suspect that he has

caught the venereal infection, he ought most strictly to observe a cooling regimen, to avoid every thing of a heating nature, as wines, spiritous liquors, rich sauces, spicies, salted, high-seasoned and smoke-dred provisions, &c. as also all aromatic and stimulating vegetables, as onions, garlic, shalot, nutmeg, mustard, cinnamon, mace, ginger, and such like. His food ought chiefly to consist of mild vegetables, milk, broths, light puddings, panado, gruels, &c. His drink may be bariey-water, milk and water, decoctions of marsh-mallows and liquorice, linseed-tea, or clear whey. Of these he ought to drink plentifully. Violent exercise of all kinds, especially riding on horseback, and venereal pleasures, are to be avoided. The patient must beware of cold, and when the inflammation is violent, he ought to keep his bed.

MEDICINE.———A virulent gonorrhœa cannot always be cured speedily and effectually at the same time. It will often continue for two or three weeks, and sometimes for five or six, even where the treatment has been very proper.

Sometimes a slight infection may be carried off in a few days by bathing the parts in warm milk and water, and injecting frequently up the urethra a little sweet oil or linseed-tea about the warmth of new milk. Should these not succeed in carrying off the infection, they will at least have a tendency to lessen its virulence.

To effect a cure, however, astringent injections will generally be found necessary. These may be various ways prepared, but I think those made with the white vitriol are both most safe and efficacious. They can be made stronger or weaker as circumstances may require; but it is best to begin with the more gentle, and increase their power if necessary. I generally order a drachm of white vitriol to be dissolved in eight or nine ounces of common or rose water, and an ordinary syringe full of it to be thrown up three or four times a day. If this quantity does not perform a cure, it may be repeated, and the dose increased.

A gonorrhœa has actually been cured by an injection of green-tea.

Whether injections be used or not, cooling purges are always proper in the gonorrhœa. They ought not however to be of the strong or drastic kind. Whatever raises a violent commotion in the body increases the danger, and tends to drive the disease deeper into the habit. Procuring two or three stools every second or third day for the first fortnight, and the same number every fourth or fifth day for the second will generally be sufficient to remove the inflammatory symptoms, to diminish the running, and to change its colour and consistence. It gradually becomes more white and ropy as the virulence abates.

If the patient can swallow a solution of vitriolated magnesia and manna, he may take six drachms, or, if his constitution requires it, an ounce of the former, with half an ounce of the latter. These may be dissolved in an English pint of boiling water, whey or thin water-gruel, and taken early in the morning.

If an infusion of senna and tamarinds be more agreeable, two drachms of the former, and an ounce of the latter, may be infused all night in an English pint of boiling water. The infusion may be strained next morning, and half an ounce of Glauber's salts dissolved in it. A tea-cupful of this infusion may be taken every half hour till

it operates. We have ordered the salts to be dissolved in a large quantity of water, because it renders their operation more mild.

Should the patient prefer an electuary, the following will answer very well. Take of the electuary of senna four ounces, cream of tartar two ounces, jalap in powder two drachms, rhubarb one drachm, and as much of the syrup of roses as will serve to make the whole into a soft electuary. Two or three tea-spoonfuls of this may be taken over-night, and about the same quantity next morning, every day that the patient chooses to take a purge.

The doses of the above medicines may be increased or diminished according as the patient finds it necessary.

When the inflammatory symptoms run high, bleeding is always necessary at the beginning. This operation, as in other topical inflammations, must be repeated according to the strength and constitution of the patient, and the vehemence and urgency of the symptoms.

Medicines which promote the secretion of urine are likewise proper in this stage of the disorder. For this purpose, an ounce of nitre and two ounces of gum-arabic pounded together, may be divided into twenty-four doses, one of which may be taken frequently in a cup of the patient's drink. If these should make him pass his urine so often as to become troublesome to him, he may either take them less frequently, or leave out the nitre altogether, and take equal parts of gum-arabic and cream of tartar. These may be pounded together, and a tea-spoonful taken in a cup of the patient's drink four or five times a-day. I have generally found this answer extremely well both as a diuretic, and for keeping the body gently open.

When the pain and inflammation are seated high, towards the neck of the bladder, it will be proper frequently to throw up an emollient clyster, which, besides the benefit of procuring stools, will serve as a fomentation to the inflamed parts.

Soft poultices, when they can conveniently be applied to the parts, are of great service. They may be made of the flour of linseed, or of wheat bread and milk, softened with fresh butter or sweet oil. When poultices cannot be conveniently used, cloths wrung out of warm water, or bladders filled with warm milk and water, may be applied. I have often known the most excruciating pains, during the inflammatory state of the gonorrhœa, relieved by one or other of these applications.

Few things tend more to keep off inflammation in the spermatic vessels than a proper truss for the scrotum. It ought to be so contrived as to support the testicles, and should be worn from the first appearance of the disease till it has ceased some weeks.

The above treatment will sometimes remove the gonorrhœa so quickly, that the person will be in doubt whether he really laboured under that disease. This, however, is too favourable a turn to be often expected. It more frequently happens, that we are able only to procure an abatement or remission of the inflammatory symptoms, so far as to make it safe to have recourse to the great antidote, mercury; yet mercury is often not at all necessary in a gonorrhœa; and when taken too early, it may do mischief.

When bleeding, purging, fomentations, and the other things recommended as above, have eased the pain, softened the pulse, relieved the

heat of urine, and rendered the involuntary erections less frequent, the patient may begin to use mercury in any form that is least disagreeable to him.

If he take the common quicksilver pill, two at night and one in the morning will be a sufficient dose at first. Should they affect the mouth too much, the dose must be lessened; if not at all, it may be gradually increased to five or six pills in the day. If calomel be thought preferable, two or three grains of it, formed into a bolus with a little of the conserve of hips may be taken at bed-time, and the dose gradually increased to eight or ten grains. One of the most common preparations of mercury now in use is the muriated quicksilver. This may be taken in the manner afterwards recommended under the confirmed lues or pox. I have always found it one of the most safe and efficacious medicines when properly used.

The above medicines may either be taken every day or every other day, as the patient is able to bear them. They ought never to be taken in such quantity as to raise a salivation, unless in a very slight degree. The disease may be more safely, and as certainly, cured without a salivation as with it. When the mercury runs off by the mouth, it is not so successful in carrrying off the disease, as when it continues longer in the body, and is discharged gradually.

Should the patient be purged or griped in the night by the mercury, he must take an infusion of senna or some other purgative, and drink freely of water-gruel, to prevent bloody stools, which are very apt to happen should the patient catch cold, or if the mercury has not been duly prepared. When the bowels are weak and the mercury is apt to gripe or purge, these disagreeable consequences may be prevented by taking with the above pills or bolus half a drachm or two scruples of the syrup of white poppies, or the confection of catechu.

To prevent the disagreeable circumstance of the mercury's affecting the mouth too much, or bringing on a salivation, it may be combined with purgatives. With this view the laxative quicksilver pill has been contrived, the usual dose of which is half a drachm, or three pills, night and morning, to be repeated every other day; but the safer way is for the patient to begin with two, or even with one pill, gradually increasing the dose.

To such persons as can neither swallow a bolus nor a pill, mercury may be given in a liquid form, as it can be suspended even in a watery vehicle, by means of gum-arabic; which not only serves this purpose, but likewise prevents the mercury from affecting the mouth, and renders it in many respects a better medicine.

Take quicksilver one drachm, gum arabic reduced to a mucilage two drachms; let the quicksilver be rubbed with the mucilage, in a marble mortar, until the globules of mercury entirely disappear; afterwards add gradually, still continuing the trituration, half an ounce of balsamic syrup, and eight ounces of simple cinnamon water. Two table-spoonfuls of this solution may be taken night and morning. Some reckon this the best form in which quicksilver can be exhibited for the cure of a gonorrhœa.

It happens very fortunately for those who cannot be brought to take the preparations of quicksilver inwardly, and likewise for persons whose bowels are too tender to bear it, that an external application of it will answer equally well, and in some respects better. It must be acknowledged, that mercury taken inwardly for any length

of time, greatly weakens and disorders the bowels; for which reason, when a plentiful use of it becomes necessary, we would prefer rubbing to the mercurial pills. The common quicksilver or blue ointment will answer very well. Of that which is made by rubbing together equal quantities of hog's lard and quicksilver, about a drachm may be used at a time. The best time for rubbing it on is at night, and the most proper place the inner side of the thighs. The patient should stand before the fire when he rubs, and should wear flannel drawers next his skin at the time he is using the ointment. If ointment of a weaker or stronger kind be used, the quantity must be increased or diminished in proportion.

If, during the use of the ointment, the inflammation of genital parts, together with the heat and feverishness, should return, or if the mouth should grow sore, the gums tender, and the breath become offensive, a dose or two of vitriolated natron, or some other cooling purge, may be taken, and the rubbing intermitted for a few days. As soon, however, as the signs of spitting are gone off, if the virulency be not quite corrected the ointment must be repeated, but in smaller quantities, and at longer intervals than before. Whatever way mercury is administered, its use may be persisted in as long as any virulency is suspected to remain.

During this, which may be called the second stage of the disorder, though so strict a regimen is not necessary as in the first or inflammatory state, yet intemperance of every kind must be avoided. The food must be light, plain, and of easy digestion; and the greatest indulgence that may be allowed with respect to drink is, a little wine diluted with a sufficient quantity of water. Spirituous liquors are to be avoided in every shape. I have often known the inflammatory symptoms renewed and heightened, the running increased, and the cure rendered extremely difficult and tedious, by one fit of excessive drinking.

When the above treatment has removed the heat of urine, and soreness of the genital parts; when the quantity of running is considerably lessened, without any pain or swelling in the groin or testicle supervening; when the patient is free from involuntary erections; and, lastly, when the running becomes pale whitish, thick, void of ill smell, and tenaceous or ropy; when all or most of these symptoms appear, the gonnrrhœa is arrived at its last stage, and we may gradually proceed to treat it as a gleet with astringent and agglutinating medicines.

OF GLEETS.

A GONORRHOEA frequently repeated, or improperly treated, often ends in a gleet, which may either proceed from a relaxation, or from some remains of the disease. It is however of the greatest importance in the cure of the gleet to know from which of these causes it proceeds. When the discharge proves very obstinate, and receives little or no check from astringent remedies, there is ground to suspect that it is owing to the latter; but if the drain is inconstant, and is chiefly observable when the patient is stimulated by lascivious ideas, or upon straining to go to stool, we may reasonably conclude that it is chiefly owing to relaxation.

In the cure of a gleet proceeding from relaxation, the principal design is to brace and restore a proper degree of tention to the debilitated and relaxed vessels. For this purpose, besides the medicines recommended in the gonorrhœa, the patient may have recourse to stronger and more powerful astringents, as the Peruvian bark, alum, vitriol, galls, tormentil, bistort, baldustines, tincture of gum-kino, &c. The injections may be rendered more astringent by the addition of a few grains of alum, or increasing the quantity of vitriol as far as the parts are able to bear it.

Cinchona may be combined with other astringents, and prepared in the following manner: Take of Peruvian bark bruised six drachms of fresh galls bruised two drachms; boil them in a pound and a half of water to a pound: to the strained liquor add three ounces of the simple tincture of the bark. A small tea-cupful of this may be taken three times a-day, adding to each cup fifteen or twenty drops of the acid elixir of vitriol.

The last remedy which we shall mention in this case is the cold bath, than which there is not perhaps a more powerful bracer in the whole compass of medicine. It ought never to be omitted in this species of gleet, unless there be something in the constitution of the patient which renders the use of it unsafe. The chief objections to the use of the cold bath are a full habit, and an unsound state of the viscera. The danger from the former may always be lessened, if not removed, by purging and bleeding: but the latter is an insurmountable obstacle, as the pressure of the water, and the sudden contraction of the external vessels, by throwing the blood with too much force upon the internal parts, are apt to occasion ruptures of the vessels, or a flux of humours upon the diseased organs. But where no objection of this kind prevails, the patient ought to plunge over head in water every morning fasting, for three or four weeks together. He should not however stay long in water, and should take care to have his skin dried as soon as he comes out.

The regimen proper in this case is the same as was mentioned in the last stage of the gonorrhœa: the diet must be drying and astringent, and the drink Spa, Pyrmont, or Bristol waters, with which a little claret or red wine may sometimes be mixed. Any person may now afford to drink these waters, as they can be every where prepared at almost no expence, by a mixture of common chalk and oil of vitriol.

When the gleet does not in the smallest degree yield to these medicines, there is reason to suspect that it proceeds from ulcers. In this case recourse must be had to mercury, and such medicines as tend to correct any predominant acrimony with which the juices may be affected, as the decoction of China, sarsaparilla, sassafras, or the like.

Mr. Fordyce says, he has seen many obstinate gleets, of two, three, or four years standing, effectually cured by a mercurial inunction, when almost every other medicine has been tried in vain. Dr. Chapman seems to be of the same opinion: but says, he has always found the mercury succeed best in this case when joined with terebinthinate and other agglutinating medicines. For which reason the Doctor recommends pills made of calomel and Venice turpentine, and desires that their use may be accompanied with a decoction of guaiacum or sarsaparilla.

Take Venice turpentine, boiled to a sufficient degree of hardness, half an ounce, calomel half a drachm. Let these be mixed and formed into sixty pills, of which five or six may be taken night and morning. If, during the use of these pills, the mouth should grow sore, or the breath become offensive, they must be discontinued till these symptoms disappear.

The last kind of remedy which we shall mention for the cure of ulcers in the urinary passage, are the suppurating candles or bougies: as these are prepared various ways, and are generally to be bought ready made, it is needless to spend time in enumerating the different ingredients of which they are composed, or teaching the manner of preparing them. Before a bougie be introduced into the urethra, however, it should be smeared all over with sweet oil, to prevent it from stimulating too suddenly: it may be suffered to continue in from one to seven or eight hours, according as the patient can bear it. Obstinate ulcers are not only often healed, but tumors and excrescences in the urinary passages taken away, and an obstruction of urine removed by means of bougies. Obstinate gleets may be removed by the use of bougies.

OF THE SWELLED TESTICLE.

The swelled testicle may either proceed from infection lately contracted, or from the venereal poison lurking in the body; the latter indeed is not very common, but the former frequently happens both in the first and second stages of a gonorrhœa, particularly when the running is unseasonably checked by cold, hard drinking, strong drastic purges, violent exercise, the too early use of astringent medicines, or the like.

In the inflammatory stage bleeding is necessary, which must be repeated according to the urgency of the symptoms: leeches are often applied to inflamed testicles with happy effects. Scarifications in some cases are preferred to leeches, as the relief afforded by the latter is often transitory. The food must be light, and the drink diluting. High-seasoned food, flesh, wines, and every thing of a heating nature, are to be avoided. Fomentations are of singular service. Poultices of bread and milk, softened with fresh butter or oil; cataplasms formed of hog's lard and leeks cut small, of each six ounces, simmered over a slow fire, strained, and applied, are likewise very proper, and ought constantly to be applied when the patient is in bed: when he is up, the testicles should be kept warm, and supported by a bag or truss, which may easily be contrived in such a manner as to prevent the weight of the testicle from having any effect.

If it should be found impracticable to clear the testicle by the cooling regimen now pointed out, and extended according to circumstances, it will be necessary to lead the patient through such a complete antivenereal course as shall ensure him against any future uneasiness. For this purpose, besides rubbing the mercurial ointment on the thighs as directed in the gonorrhœa, the patient must be confined to bed, if necessary, for five or six weeks, suspending the testicle, all the while, with a bag or truss, and plying him inwardly with strong decoctions of sarsaparilla.

When these means do not succeed, and there is reason to suspect a scrophulous or cancerous habit, either of which may support a schirrous induration, after the venereal poison is corrected, the parts should be fomented daily with a decoction of hemlock, the bruised leaves of which may likewise be added to the poultice, and the extract (made into pills, and taken in the manner directed under the article Cancer) at the same time taken inwardly. This practice is strongly recommended by Dr. Storck in schirrous and cancerous cases; and Mr. Fordyce assures us, that by this method he has cured diseased testicles of two or three years standing, even when ulcerated, and when the schirrus had begun to be affected with pricking and lancinating pains.

Hernia humoralis, or swelled testicle arising from a suppressed gonorrhœa, generally disappears when a bubo arises in the groin, and procceeds to suppuration.

OF BUBOES.

Venereal buboes are hard tumors seated in the groin occasioned by the venereal poison lodged in this part. They are of two kinds; viz. such as proceed from a recent infection, and such as accompany a confirmed lues.

The cure of recent buboes, that is, such as appear soon after impure coition, may be first attempted by dispersion, and, if that should not succeed, by suppuration. To promote the dispersion of a bubo, the same regimen must be observed as was directed in the first stage of a gonorrhœa. The patient must likewise be bled, and take some cooling purges, as the decoction of tamarind and senna, Glauber's salts, and the like. If by this course the swelling and other inflammatory symptoms abate, we may safely proceed to the use of mercury, which must be continued till the venereal virus is quite subdued. For the dispersion of a venereal tumor or a bubo, leeches applied to the part affected will be found equally efficacious as in the inflamed testicle, and the part may be frequently fomented with a decoction of hemlock leaves, which may also be applied as a discutient cataplasm, and is described in the Appendix.

But if the bubo should from the beginning be attended with great heat, pain, and pulsation, it will be proper to promote its suppuration. For this purpose the patient may be allowed to use his ordinary diet, and to take now and then a glass of wine. Emollient cataplasms, consisting of bread and milk softened with oil or fresh butter, may be applied to the part; and, in cold constitutions, where the tumor advances slowly, white lily-roots boiled, or sliced onions raw and a sufficient quantity of ointment of yellow wax (yellow basilicon), may be added to the poultice.

When the tumor is ripe, which may be known by its conical figure, the softness of the skin, and a fluctuation of matter plainly to be felt under the finger, it may be opened either by a caustic or a lancet, and afterwards dressed with digestive ointment.

It sometimes however happens, that buboes can neither be dispersed nor brought to a suppuration, but remain hard indolent tumors. In this case the indurated glands must be consumed by caustic: if

they should become schirrous, they must be dissolved by the application of hemlock, both externally and internally, as directed in the schirrous testicle.

OF CHANCRES.

Chancres are superficial, callous, eating ulcers; which may happen either with or without a gonorrhœa. They are commonly seated about the glans, and make their appearance in the following manner: First a little red pimple arises, which soon becomes pointed at top, and is filled with a whitish matter inclining to yellow. This pimple is hot, and itches generally before it breaks: afterwards it degenerates into an obstinate ulcer, the bottom of which is usually covered with a viscid mucus, and whose edges gradually become hard and callous. Sometimes the first appearance resembles a simple excoriation of the cuticle; which, however, if the cause be venereal, soon becomes a true chancre.

A chancre is sometimes a primary affection, but it is much oftener symptomatic, and is the mark of a canfirmed lues. Primary chancres discover themselves soon after impure coition, and are generally seated in parts covered with a thin cuticle as the lips, the nipples of women, the glans, penis of men, &c.

When venereal ulcers are seated in the lips, the infection may be communicated by kissing. I have seen very obstinate venereal ulcers in the lips, which I have all the reason in the world to believe were communicated in this manner.

Nurses ought to beware of suckling infected children, or having their breasts drawn by persons tainted with the venereal disease. This caution is peculiarly necessary for nurses who reside in the neighbourhood of great towns.

When a chancre appears soon after impure coition, its treatment is nearly similar to that of the virulent gonorrhœa. The patient must observe the cooling regimen, lose a little blood, and take some gentle doses of salts and manna. The parts affected ought frequently to be bathed or rather soaked in warm milk and water, and, if the inflammation be great, an emollient poultice of cataplasm may be applied to them. This course will in most cases be sufficient to abate the inflammation, and prepare the patient for the use of mercury.

Symptomatic chancres are commonly accompanied with ulcers in the throat, nocturnal pains, scurvy; eruptions about the roots of the hair, and other symptoms of a confirmed lues. Though they may be seated in any of the parts mentioned above, they commonly appear upon the private parts, or the inside of the thigh. They are also less painful, but frequently much larger and harder than primary chancres. As their cure must depend upon that of the pox, of which they are only a symptom, we shall take no further notice of them, till we come to treat of a confirmed lues. Chancres should be frequently washed with milk and water a little warm; once or twice a-day, a little calomel may be sprinkled upon them, or the patient may apply the cerate of calomel, inserted in the Appendix.

Thus we have related most of the symptoms which accompany or succeed a violent gonorrhœa, and have also given a short view of

their proper treatment; there are however, several others which sometimes attend this disease, as a strangury or obstruction of urine, a phymosis, paraphymosis, &c.

A strangury may be occasioned either by a spasmodic constriction, or an inflammation of the urethra and parts about the neck of the bladder. In the former case, the patient begins to void his urine with tolerable ease; but, as soon as it touches the galled or inflamed urethra, a sudden constriction takes place, and the urine is voided by spurts, sometimes by drops only. When the strangury is owing to an inflammation about the neck of the bladder, there is a constant heat and uneasiness of the part, a perpetual desire to make water, while the patient can only render a few drops, and a troublesome tenesmus, or constant inclination to go to stool.

When the strangury is owing to spasm, such medicines as tend to dilute and blunt the salts of the urine will be proper. For this purpose, besides the common diluting liquors, soft and cooling emulsions, sweetened with the syrup of poppies, may be used. Should these not have the desired effect, bleeding and emollient fomentations will be necessary.

When the complaint is evidently owing to an inflammation about the neck of the bladder, bleeding must be more liberally performed, and repeated according to the urgency of the symptoms. After bleeding, if the strangury still continues, soft clysters, with a proper quantity of laudanum in them, may be administered, and emollient fomentations applied to the region of the bladder. At the same time, the patient may take every four hours a tea-cupful of barley-water, to an English pint of which six ounces of the syrup of marsh-mallows, four ounces of the oil of sweet almonds, and half an ounce of nitre, may be added. If these remedies should not relieve the complaint, and a total suppression of urine should come on, bleeding must be repeated, and the patient set in a warm bath up to the middle. It will be proper in this case to discontinue the diuretics, and to draw off the water with a catheter; but as the patient is seldom able to bear its being introduced, we would rather recommend the use of mild bougies. These often lubricate the passage, and greatly facilitate the discharge of urine. Whenever they begin to stimulate or give any uneasiness, they may be withdrawn.

The phymosis is such a constriction of the prepuce over the glans as hinders it from being drawn backards; the paraphymosis, on the contrary, is such a constriction of the perpuce behind the glans as hinders it from being brought forward.

The treatment of these symptoms is so nearly the same with that of the virulent gonorrhœa that we have no occasion to enlarge upon it. In general, bleeding, purging, poultices, and emollient fomentations, are sufficient. Should these however fail of removing the stricture, and the parts be threatened with a mortification, twenty or thirty grains of epecacuanha, and one grain of emetic tartar, may be given for a vomit, and may be worked off with warm water or thin gruel.

It sometimes happens, that, in spite of all indeavours to the contrary, the inflammation goes on, and symptoms of a beginning mortification appear. When this is the case, the prepuce must be scarified with a lancet, and, if necessary, divided, in order to prevent a strangulation, and set the imprisoned glans at liberty. We shall not

describe the manner of performing this operation, as it ought always to be done by a skilful surgeon. When a mortification has actually taken place, it will be necessary, besides performing the above operations, to foment the parts frequently with cloths wrung out of a strong decoction of camomile flowers and Peruvian bark, and to give the patient a drachm of the bark in powder every two or three hours.

With regard to the priapism, chordee, and other distortions of the penis, their treatment is no way different from that of the gonorrhœa. When they prove very troublesome, the patient may take a few drops of laudanum at night, especially after the operation of a purgative through the day.

OF A CONFIRMED LUES.

We have hitherto treated of those affections in which the venereal poison is supposed to be confined chiefly to the particular part by which it was received, and shall next take a view of the lues in its confirmed state; that is, when the poison is actually received into the blood, and, circulating with it through every part of the body, mixes with the several secretions, and renders the whole habit tainted.

The symptoms of a confirmed lues are, buboes in the groin; pains of the head and joints, which are peculiarly troublesome in the night, or when the patient is warm in bed; scabs and scurfs in various parts of the body, especially on the head, of a yellowish colour, resembling a honeycomb; corroding ulcers in various parts of the body, which generally begin about the throat, from whence they creep gradually, by the palate, towards the cartilage of the nose, which they destroy; excrescences or exostoses arise in the middle of the bones, and their spongy ends become brittle, and break upon the least accident; at other times they are soft, and bend like wax; the conglobate glands become hard and callous, and form in the neck, arm-pits, groin, and mesentery, hard moveable tumors, like the king's evil; tumors of different kinds are likewise formed in the lymphatic vessels, tendons, ligaments, and nerves, as the gummata, ganglia, nodes, tophs, &c.; the eyes are affected with itching, pain, redness, and sometimes with total blindness, and the ears with a singing noise, pain, and deafness, whilst their internal substance is exulcerated and rendered carious: at length all the animal, vital, and natural functions are depraved; the face becomes pale and livid; the body emaciated and unfit for motion, and the miserable patient falls into an atrophy or wasting consumption.

Women have symptoms peculiar to the sex; as cancers of the breast; a suppression or overflowing of the menses; the whites; hysteric affections; an inflammation, abscess, schirrus, gangrene, cancer, or ulcer of the womb; they are generally either barren or subject to abortion; or, if they bring children into the world, they have an universal erysipelas, are half rotten, and covered with ulcers.

Such is the catalogue of symptoms attending this dreadful disease in its confirmed state. Indeed they are seldom all to be met with in the same person, or at the same time: so many of them, however are generally present as are sufficient to alarm the patient; and if he has

reason to suspect the injection is lurking in his body, he ought immediately to set about the expulsion of it, otherwise the most tragical consequences will insue.

The only certain remedy hitherto known in Europe for the cure of this disease is mercury, which may be used in a great variety of forms, with nearly the same success. The preparations which were chiefly used by the late Dr. Buchan in the confirmed lues were calomel and calcined mercury; the latter was very often prescribed by that celebrated surgeon, the late John Hunter. Some time ago it was reckoned impossible to cure a confirmed lues without a salivation. This method is now however pretty generally laid aside, and mercury is found to be as efficacious, or rather more so, in expelling the venereal poison, when administered in such a manner as not to run off by the salivary glands.

Though many are of opinion, that the mercurial ointment is as efficacious as any other preparation of that mineral, yet experience has taught me to think otherwise. I have often seen the most obstinate venereal cases, where great quantities of mercurial ointment had been used in vain, yield to to the saline preparations of mercury. Nor am I singular in this opinion. Mr. Clare, an eminent surgeon of this city, assures me, that for some time past he has employed, in venereal cases, a saline preparation of mercury with most happy success. This preparation, rubbed with a sufficient quantity of any mild powder, he applies, in small portions to the tongue, where with a gentle degree of friction, it is immediately absorbed, and produces its full effect upon the system, without doing the least injury to the stomach or bowels; a matter of the greatest importance in the application of this most active and powerful remedy.

It is impossible to ascertain either the exact quantity of medicines that must be taken, or the time they ought to be continued, in order to perform a cure. These will ever vary according to the constitution of the patient, the season of the year, the degree of infection, the time it has lodged in the body, &c. But though it is difficult, as Astruc observes, to determine à priori what quantity of mercury will, in the whole, be necessary to cure this distemper completely; yet it may be judged of à posteriori, from the abatement and ceasing of the symptoms. The same author adds, that commonly not less than two ounces of the strong mercurial ointment is sufficient, and not more than three or four ounces necessary.

The only chemical preparation of quicksilver we shall take notice of, is, the corrosive sublimate, i. e. muriated quicksilver. This was some time ago brought into use for the venereal disease, in Germany, by the illustrious Baron Van Swieten; and was soon after introduced into Britain by the learned Sir John Pringle, at that time physician to the army. The method of given it is as follows: One grain of muriated quicksilver is dissolved in two ounces of French brandy or malt spirits; and of this solution, an ordinary table-spoonful, or the quantity of half an ounce, is to be taken twice a-day, and to be continued as long as any symptoms of the disorder remain. To those whose stomach cannot bear the solution, this preparation of quicksilver may be given in form of pill.

It may be given in distilled water, or any other liquid that the patient chooses. I commonly order ten grains to be dissolved in an ounce of the spirit of wine, for the conveniency of carriage, and let

the patient take twenty or thirty drops of it night and morning in half a glass of brandy or other spirits. Mr. Debra, an ingenious chemist of this place, informs me, that he prepares a salt of mercury much more mild and gentle in its operation than the sublimate, though equally efficacious.

Several roots, woods, and barks, have been recommended for curing the venereal disease; but none of them have been found, upon experience, to answer the high encomiums which had been bestowed upon them. Though no one of these is to be depended upon alone, yet, when joined with mercury, some of them are found to be very beneficial in promoting a cure. One of the best we know yet is sarsaparilla which may be prepared and taken according to the directions in in the Appendix.

The mezereon-root is likewise found to be a powerful assistant to the sublimate, or any other mercurial. It may either be used along with the sarsaparilla, as directed in the Appendix, or by itself. Those who choose to use the mezereon by itself, may boil an ounce of the fresh bark, taken from the root, in twelve English pints of water to eight, adding towards the end an ounce of liquorice. The dose of this is the same as of the decoction of sasaparilla.

The lobelia and many other roots and woods might be mentioned which have been extolled for curing the venereal disease, as the china-root, the roots of soap wort, burdock, &c. as also the wood of guaiacum and sassasras; but as none of these have been found to possess virtues superior to those already mentioned, we shall, for the sake of brevity, pass them over, and shall conclude our observations on this disease with a few general remarks concerning the proper management of the patient, and the nature of the infection.

GENERAL OBSERVATION.

The condition of the patient ought always to be considered previous to his entering upon a course of mercury in any form. It would be equally rash and dangerous to administer mercury to a person labouring under any violent acute disease, as a putrid fever, pleurisy, peripneumony, or the like. It would likewise be dangerous in some chronic cases; as a slow hectic fever, or the last stage of a consumption. Sometimes, however, these diseases proceed from a confirmed lues; in which case it will be necessary to give mercury. In chronic diseases of a less dangerous nature, as the asthma, the gravel, and such like, mercury, if necessary, may be safely administered. If the patient's strength has been greatly exhausted by sickness, labour, abstinence, or any other cause, the use of mercury must be postponed, till by time, rest, and a nourishing diet, it can be sufficiently restored.

The preparations of quicksilver ought not to be administered to women during the menstrual flux, or when the period is near at hand. Neither should it be given in the last stage of pregnancy. If, however, the woman be not near the time of her delivery, and circumstances render it necessary, mercury may be given, but in smaller doses and at greater intervals than usual: with these precautions, both the mother and child may be cured at the same time; if not, the disorder will at least be kept from growing worse, till the woman be brought to bed, and sufficiently recovered, when a more effectual

method may be pursued, which, if she suckles her child, will in all probability be sufficient for the cure of both.

Mercury ought always to be administered to infants with the greatest caution. Their tender condition unfits them for supporting a salivation, and makes it necessary to administer even the mildest preparations of mercury to them with a sparing hand. A similar conduct is recommended in the treatment of old persons, who have the misfortune to labour under a confirmed lues. No doubt the infirmities of age must render people less able to undergo the fatigues of a salivation; but this as was formerly observed, is never necessary; besides, we have generally found that mercury had much less effect upon very old persons than on those who were younger.

Hysteric and hypochondriac persons, and such as are subject to an habitual diarrhœa or dysentery, or to frequent and violent attacks of epilepsy, or who are afflicted with the scrophula or the scurvy, ought to be cautious in the use of mercury. Where any one of these disorders prevails, it ought either, if possible, to be cured, or at least palliated, before the patient enters upon a course of mercury. When this cannot be done, the mercury must be administered in smaller doses, and at longer intervals than usual.

The most proper seasons for entering upon a course of mercury are the spring and autumn, when the air is of a moderate warmth. If the circumstances of the case, however, will not admit of delay, we must not defer the cure on account of the season, but must administer the mercury; taking care at the same time to keep the patient's chamber warmer or cooler, according as the season of the year requires.

Loss of teeth is no uncommon consequence of the large use of the preparations of quicksilver: this arises from the separation of the gums from the teeth; from absorption of the alveolar processes, and perhaps also from the thickening of the membrane lining the socket. On examining these parts in persons who have died while under a mercurial course, Mr. Fox (in his History and Treatment of Diseases of the Teeth) says, he found the alveoli much less dense, of a more porous texture, than the bone in its natural or sound state.

We have already recommended bleeding and gentle purges previous to the administration of mercury, and shall only now add, that these are always to be repeated according to the age, strength, constitution and other circumstances of the patient. Afterwards, if it can be conveniently done, the patient ought to bathe once or twice a-day, for a few days, in lukewarm water. His diet in the mean time must be light, moist, and cooling. Wine, and all heating liquors, also violent bodily exercise, and all great exertions of the mind, are carefully to be avoided.

A proper regimen is likewise to be observed by such as are under a course of mercury. Inattention to this not only endangers the patient's life, but often also disappoints him of a cure. A much smaller quantity of mercury will be sufficient for the cure of a person who lives low, keeps warm, and avoids all manner of excess, than of one who cannot endure to put the smallest restraint upon his appetite: indeed it but rarely happens that such are thoroughly cured.

There is hardly any thing of more importance, either for preventing or removing venereal infection, than cleanliness. By an early atten-

tion to this, the infection might often be prevented from entering the body; and, where it has already taken place, its effects may be greatly mitigated. The moment any person has reason to suspect that he has recieved the infection, he ought to wash the parts with water and spirits, sweet oil, or milk and water; a small quantity of the last may likewise be injected up the urethra, if it can be conveniently done. Whether this disease at first took its rise from dirtiness is hard to say; but wherever that prevails, the infection is found in its greatest degree of virulence, which gives ground to believe that a strict attention to cleanliness would go far towards extirpating it altogether.

I have not only often seen a recent infection carried off in a few days by means of cleanliness, viz. bathing, fomentations, injections, &c. but have likewise found it of the greatest advantage in the more advanced stage of the disease. Of this I had lately a very remarkable instance, in a man whose penis was almost wholly consumed by venereal ulcers: the matter had been allowed to continue on the sores, without any care having been taken to clean them, till, notwithstanding the use of mercury and other medicines, it had produced the effects above mentioned. I ordered warm milk and water to be injected three or four times a-day into all the sinuous ulcers, in order to wash out the matter; after which they were stuffed with dry lint, to obsorb the fresh matter as it was generated. The patient at the same time took every day half a grain of muriated quicksilver, dissolved in an ounce of brandy, and drank an English quart of the decoction of sarsaparilla. By this treatment, in about six weeks, he was perfectly cured; and, what was very remarkable, a part of the penis was actually regenerated.

Doctor Gilchrist has given an account of a species of the lues venerea which prevails in the west of Scotland, to which the natives give the name of Sibbins or Sivvens. The Doctor observes, that the spreading of this disease is chiefly owing to the neglect of cleanliness, and seems to think that, by due attention to that virtue, it might be extirpated. The treatment of this disease is similar to that of a confirmed lues or pox. The yaws, a disease which is now very common both in America and the West India islands, may also be cured in the same manner.

When the venereal disease has been neglected, or improperly treated, it often becomes a disorder of the habit. In this case the cure must be attempted by restoratives, as a milk diet, the decoction of sarsaparilla, and such like, to which mercury may be occasionally added. It is a common practice in North Britain to send such patients to drink goat-whey. This is a very proper plan, provided the infection has been totally eradicated beforehand; but when that is not the case, and the patient trusts to the whey for finishing his cure, he will often be disappointed. I have frequently known the disease return with all its virulence after a course of goat-whey, even when that course had been thought quite sufficient for completing the cure.

Tar-water, made with two pounds of tar to four pints of water, given in the quantity of one to three pints in twenty-four hours, has been taken, and has also been employed externally, with great advantage, in inveterate venereal affections, pains in the bones, caries, exostoses, &c.; therefore tar-water merits the greatest attention in

the cure of syphilitic disorders, being in all cases an excellent auxiliary to the preparations of quicksilver, especially in inveterate states of the disease.

One of the most unfortunate circumstances attending patients in this disease, is the necessity they are often laid under of hurrying the cure. This induces them to take medicine too fast, and to leave it off too soon. To avoid this, we would advise, that the patient should never leave off taking medicine immediately upon the disappearing of the symptoms, but continue it for some time after, gradually lessening the quantity, till there is sufficient ground to believe that the disease is entirely eradicated.

It is not only difficult, but absolutely impossible, to ascertain the exact degree of virulence that may attend the disease; for which reason it will always be a much safer rule to continue the use of medicine too long, than to leave it off too soon.

It is peculiarly unfortunate for the cure of this disease, that not one in ten of those who contract it are either able or willing to submit to a proper plan of regimen. The patient is willing to take medicine; but he must follow his business, and, to prevent suspicions, he must eat and drink like the rest of the family. This is the true source of nine-tenths of all the mischief arising from the venereal disease. I never knew the cure attended with any great difficulty or danger where the patient strictly followed the physician's advice; but a volume would not be sufficient to point out the dreadful consequences which proceed from an opposite conduct. Schirrous testicles, ulcerous sore throats, madness, consumptions, carious bones, and a rotten progeny, are a few of the blessings derived from this source.

CHAP XLVIII.

DISEASES OF WOMEN.

WOMEN, in all civilized nations, have the management of domestic affairs, and it is very proper they should, as Nature has made them less fit for the more active and laborious employments, This indulgence, however, is generally carried too far; and females, instead of being benefited by it, are greatly injured, from the want of exercise and free air. To be satisfied of this, one need only compare the fresh and ruddy looks of a milk maid with the pale complexion of those females whose whole time is spent within doors. Though Nature has made an evident distinction between the male and the female with regard to bodily strength and vigour, yet she certainly never meant, either that the one should be always without or the other always within doors.

The confinement of females, besides hurting their figure and complexion, relaxes their solids, weakens their minds, and disorders all the

functions of the body. Hence proceed obstructions, indigestion, flatulence, abortions, and the whole train of nervous disorders. These not only unfit women for being mothers and nurses, but often render them whimsical and ridiculous. A sound mind depends so much upon a healthy body, that where the latter is wanting, the former is rarely to be found.

I have always observed, that women who were chiefly employed without doors, in the different branches of husbandry, gardening, and the like, were almost as hardy as their husbands, and that their children were likewise strong and healthy. We shall proceed to point out those circumstances in the structure and design of females, which subject them to peculiar diseases; the chief of which are, their monthly evacuations, pregnancy, and child-bearing. These indeed cannot properly be called diseases, but, from the delicacy of the sex, and their being often improperly managed in such situations, they become the source of numerous calamities: therefore females whose circumstances will permit should be under the direction of a skilful physician, on whose advice the patient ought with confidence to rely.

OF THE MENSTRUAL DISCHARGE.

Females generally begin to menstruate about the age of fifteen, and leave it off about fifty, which renders these two periods the most critical of their lives. About the first appearance of this discharge, the constitution undergoes a very considerable change, generally indeed for the better, though sometimes for the worse. The greatest care is now necessary as the future health and happiness of the female depend in a great measure upon her conduct at this period.

It is the duty of mothers, and those who are entrusted with the education of girls, to instruct them early in the conduct and management of themselves at this critical period of their lives. False modesty, inattention, and ignorance of what is beneficial or hurtful at this time, are the sources of many diseases and misfortunes in life, which a few sensible lessons from an experienced matron might have prevented. Nor is care less necessary in the subsequent returns of this discharge. Taking improper food, violent affections of the mind, or catching cold at this period, is often sufficient to ruin the health, or to render the female ever after incapable of procreation.

If a girl about this time of life be confined to the house, kept constantly setting, and neither allowed to romp about, nor imployed in any active business which gives exercise to the whole body, she becomes weak, relaxed, and puny; her blood not being duly prepared, she looks pale and wan; her health, spirits, and vigour decline, and she sinks into a valetudinarian for life. Such is the fate of numbers of those unhappy females, who, either from too much indulgence or their own narrow circumstances, are, at this critical period, denied the benefit of exercise and free air.

A lazy, indolent disposition proves likewise very hurtful to girls at this period. One seldom meets with complaints from obstructions amongst the more active and industrous part of the sex; whereas the indolent and lazy are seldom free from them. These are in a manner

eaten up by the chlorosis, or green-sickness, and other diseases of this nature. Chlorosis is a disease often difficult to romove, and frequently degenerates into a fatal consumption; we therefore recommend it to all who wish to escape these calamities, to avoid indolence and inactivity as their greates enemies, and to be as much abroad in the open air as possible. The patient should have medicines of the alterative, aperient, attenuating kind, assisted by a diet of the lightest animal food, broths full of vegetables, light puddings, water, or small beer, without wine.

Another thing which proves very hurtful to girls about this period of life is unwholesome food. Fond of all manner of trash, they often indulge in it, till their whole humours are quite vitiated. Hence ensue indigestions, want of appetite, and a numerous train of evils. If the fluids be not duly prepared, it is utterly impossible that the secretions should go properly on. Accordingly we find, that such girls as lead an indolent life, and eat great quantities of trash, are not only subject to obstructions of menses, but likewise to glandular obstructions; as the scrophula or king's evil, &c.

A dull disposition is also very hurtful to girls at this period. It is a rare thing to see a sprightly girl who does not enjoy good health, while the grave, moping, melancholy creature, proves the prey of vapours and hysterics. Youth is the season of mirth and cheerfulness. Let it therefore be indulged. It is an absolute duty. To lay in a stock of health in time of youth is as necessary a piece of prudence, as to make provision against the decays of old age. While, therefore, wise Nature prompts the happy youth to join in sprightly amusements, let not the severe dictates of hoary age forbid the useful impulse, nor damp with serious gloom the season destined to mirth and innocent festivity.

After a female has arrived at that period of life when the menses usnally begin to flow, and they do not appear, but, on the contrary, her health and spirits begin to decline, we would advise her being placed in a situation where she can enjoy the benefit of free air and agreeable company. There let her eat wholesome food, take sufficient exercise, and amuse herself in the most agreeable manner; and we have little reason to fear, but Nature, thus assisted, will do her proper work. Indeed she seldom fails, unless where the fault is on our side.

This discharge in the beginning is seldom so instantaneous as to surprise females unawares. It is generally preceded by symptoms which foretel its approach; as a sense of heat, weight, and dull pain in the loins; distention and hardness of the breasts; head-ach; loss of appetite; lassitude; paleness of the countenance: and sometimes a slight degree of fever. When these symptoms appear about the age at which the menstral flux usually begins every thing should be carefully avoided which may obstruct that necessary and salutary evacuation; and all means used to promote it, as sitting frequently over the steams of warm water, drinking warm diluting liquors, &c.

After the menses have once begun to flow, the greatest care should be taken to avoid every thing that may tend to obstruct them. Females ought to be exceeding cautious of what they eat or drink at the time they are out of order. Every thing that is cold, or apt to sour on the stomach, ought to be avoided; as fruit, butter-milk, and such like. Fish, and all kinds of food that are hard of digestion, are also to be avoided. As it is impossible to mention every thing that may

disagree with individuals at this time, we would recommend it to every female to be very attentive to what disagrees with herself, and carefully to avoid it.

Cold is extremely hurtful at this particular period. More of the sex date their diseases from colds, caught while they are out of order, than from all other causes. A degree of cold that will not in the least hurt them at another time, will at this period be sufficient entirely to ruin their health and constitution.

The greatest attention ought likewise to be paid to the mind, which should be kept as easy and cheerful as possible. Every part of the animal economy is influenced by the passions, but none more so than this. Anger, fear, grief, and other affections of the mind, often occasion obstructions of the menstrual flux, which prove absolutely incurable.

From whatever cause this flux is obstructed, except in the state of pregnancy, proper means should be used to restore it. For this purpose we would recommend sufficient exercise in a dry, open, and rather cool air; wholesome diet, and, if the body be weak and languid, generous liquors; also cheerful company and all manner of amusements. If these fail, recourse must be had to medicine, especially of the strengthening and antispasmodic kind: moderate exercise, bleeding, and electricity, by the assistance of the warm bath, then a temperate, and afterwards the cold bath, may complete the cure.

When obstructions proceed from a weak relaxed state of the solids, such medicines as tend to promote digestion, to brace the solids, and assist the body in preparing good blood, ought to be used. The principal of these are iron and Peruvian bark, with other bitter and astringent medicines. Filings of iron may be infused in wine or ale, two or three ounces to an English quart, and after it has stood for two or three weeks it may be filtered, and about half a wine-glass of it taken twice a-day: or prepared steel may be taken in the dose of half a drachm, mixed with a little honey or treacle, three or four times a-day. The cinchona and other bitters may either be taken in substance or infusion, as is most agreeable to the patient. This discharge does not at its commencement observe very regular periods of return, but appears only once in two or three months, and afterwards oftener, till at last the habit of a regular monthly return is established.

When obstructions proceed from a viscid state of the blood, or for women of a gross or full habit, exercise, evacuations, and such medicines as attenuate the humours, are necessary. The patient in this case ought to be bled, to bathe her feet frequently in warm water, to take now and then a cooling purge, and to live upon a spare thin diet. Her drink should be whey, water, or small beer, and she ought to take sufficient exercise. A tea-spoonful of the tincture of black hellebore may also be taken twice a-day in a cup of warm water. Warmth in the feet is of great service at the time of menstruation, and cold very injurious; nay, the menses are often suddenly stopped by the coldness of the feet.

When obstructions proceed from affections of the mind, as grief, fear, anger, &c. every method should be taken to amuse and divert the patient. And that she may the more readily forget the cause of her affliction, she ought, if possible, to be removed from the place

where it happened. A change of place, by presenting the mind with a variety of new objects, has often a very happy influence in relieving it from the deepest distress. A soothing, kind, and affable behaviour to females in this situation is also of the last importance.

An obstruction of the menses is often the effect of other maladies. When this is the case, instead of giving medicines to force that discharge, which might be dangerous, we ought by all means to endeavour to restore the patient's health and strength. When that is affected, the other will return of course. The power of mineral waters, especially those of Bath, in promoting the menstrual discharge is pretty generally known.

A frequent cough, a quick pulse, and difficulty of respiration, are symptoms usually attending a total absence or unfrequent return of the menstrual discharge, consequently these symptoms alone are not indicative of danger; but if the cough, instead of being only occasional, be constant, accompanied with weight and pain in the chest, and an increased secretion of mucus, particularly in the morning; if, with a palid countenance, there be a circumscribed spot of florid colour in the cheek; if there be on the present occasion, or if she has formerly been liable to, a spitting of blood; and if not only debility but emaciation attend these symptoms now, there is cause for alarm respecting the state of the lungs, especially if the general structure, and general or hereditary temperament, give her a predisposition to pulmonary consumption; when such is the case, recourse must be had to the best medical advice without delay.

But the menstrual flux may be too great as well as too small. When this happens, the patient becomes weak, the colour pale, the appetite and digestion are bad, to which œdematous swellings of the feet, dropsies, and consumptions, often ensue. This frequently happens to women about the age of forty-five, or fifty, and is very difficult to cure. It may proceed from a sedentary life; a full diet, consisting chiefly of salted, high-seasoned, or acrid food; the use of spirituous liquors; excessive fatigue; relaxation; a dissolved state of the blood; violent passions of the mind, &c.

The treatment of this disease must be varied according to its cause. When it is occasioned by any error in the patient's regimen, an opposite course to that which induced the disorder must be pursued, and such medicines taken as have a tendency to restrain the flux, and counteract the morbid affections of the system from whence it proceeds.

To restrain the flux, the patient should be kept quiet and easy both in body and mind. If it be very violent, she ought to enid libe with her head low; to live upon a cool and slender diet, as veal or chicken broths with bread; and to drink decoctions of nettle-roots, or the greater comfrey. If these be not sufficient to stop the flux, stronger astringents may be used, as catechu, alum, elixir of vitriol, the Peruvian bark, &c.

Two drachms of alum and one of catechu may be pounded together, and divided into eight or nine doses, one of which may be taken three times a-day.

Persons whose stomachs cannot bear the alum, may take two table-spoonfuls of the infusion of roses three or four times a-day, to each dose of which ten drops of laudanum may be added.

If these should fail, half a drachm of the Peruvian bark, in pow-

der, with ten drops of the diluted vitriolic acid, may be taken in a glass of red wine four times a-day.

The uterine flux may offend in quality as well as in quantity. What is usually called the flour albus, or whites, is a very common disease, and proves extremely hurtful to delicate women. This discharge, however, is not always white, but sometimes pale, yellow, green or of a blackish colour; sometimes it is sharp and corrosive, sometimes foul and fœtid, &c. It is attended with a pale complexion, pain in the back, loss of appetite, swelling of the feet, and other signs of debility. It generally proceeds from a relaxed state of the body, arising from indolence, the excessive use of tea, coffee, or other weak and watery diet.

To remove this disease, the patient must take as much exercise as she can bear without fatigue. Her food should be solid and nourishing, but of easy digestion; and her drink rather generous, as red port or claret mixed with Pyrmont, Bristol, or lime water. Tea, coffee, and a costive state of the intestinal canal, are to be avoided. I have often known strong broths have an exceeding good effect, and sometimes a milk diet alone will perform a cure. The patient ought not to lie too long a bed. When medicine is necessary we know none preferable to the Peruvian bark, which in this case ought always to be taken in substance. In warm weather the cold bath will be of considerable service. It is however generally proper for persons who labour under such complaints to consult without reserve a candid and intelligent professor of the healing art.

That period of life at which the menses cease to flow is likewise very critical to the sex. The stoppage of any customary evacuation, however small, is sufficient to disorder the whole frame, and often to destroy life itself: hence it comes to pass that so many women either fall into cronic disorders, or die about this time. Such of them, however, as survive it, without contracting any chronic disease, often become more healthy and hardy than they were before, and enjoy strength and vigour to a very great age.

If the menses cease all of a sudden, in women of a full habit, pains in the stomach, giddiness, flatulence, frequent acid eructations, and pains in the joints resembling rheumatic affections, form a part of the sufferings of the patient; they ought then to abate somewhat of their usual quantity of food, especially of the more nourishing kind, as flesh, eggs, &c. They ought likewise to take sufficient exercise, and to keep the body open. This may be done by taking, once or twice a-week, a little rhubarb, or half an ounce to an ounce of aloetic wine, or five to fifteen grains of the powder of aloes with guaiacum.

It often happens that women of a gross habit, at this period of life, have ulcerous sores break out about their ankles, or in other parts the body. Such ulcers ought to be considered as critical, and should either be suffered to continue open, or have artificial drains substituted in their stead. Women who will have such sores dried up, are often soon after carried off by acute diseases, or fall into those of a chronic nature. In very relaxed habits, a prolapsus viteri (falling-down of the womb) not unusually happens, which requires the assistance of a skilful surgeon, and ought never to be neglected.

OF PREGNANCY.

Though pregnancy is not a disease, yet that state is often attended with a variety of complaints which merit attention, and which sometimes require the assistance of medicine. Some women indeed are more healthy during their pregnancy than at any other time; but this is by no means the general case: most of them breed in sorrow, and are frequently indisposed during the whole time of pregnancy. Few fatal diseases, however, happen during that period; and hardly any, except abortion, that can be called dangerous.

Pregnant women are often afflicted with the heart-burn. The method of treating this complain has already been pointed out. Theya re likewise, in the more early periods of pregnancy often harassed with sickness and vomiting, especially in the morning. The method of relieving these complaints has also been shewn. Both the head-ach and tooth-ach are very troublesome symptoms of pregnancy. The former may generally be removod by keeping the body gently open by the use of prunes, figs, roasted apples, and such like. When the pain is very violent, bleeding may be necessary. For the treatment of the latter, we must refer to that article. Several other complaints incident to pregnant women might be mentioned, as a cough and difficulty of breathing, costiveness, suppression and incontinency of urine, &c.; but as all of these have been taken notice of before, it is needless to repeat them.

Every pregnant woman is more or less in danger of abortion. This should be guarded against with the greatest care, as it not only weakens the constitution, but renders the woman liable to the same misfortune afterwards. Abortion may happen at any period of pregnancy; but it is most common in the second or third month. Sometimes, however, it happens in the fourth or fifth. If it happens within the first month, it is usually called a false conception; if after the seventh month, the child may often be kept alive by proper care.

The common cause of abortion are, the death of the child; weakness or relaxation of the mother; great evacuations; violent exercise; raising great weights; reaching too high; jumping or stepping from an eminence; vomiting; coughing; convulsion fits; blows on the belly; falls; fevers; disagreeable smells; excess of blood; indolence; high living, or the contrary; violent passions or affections of the mind, as fear grief &c. The tenesmus to which some pregnant women are subject, and which sometimes occasions abortion, is most speedily relieved by clysters of the oil of almonds, with a few drops of the tincture of opium.

The signs of approaching abortion are, pain in the loins, or about the bottom of the belly; a dull heavy pain in the inside of the thighs; a slight degree of coldness or shivering; sickness; palpitation of the

heart: the breasts become flat and soft; the belly falls; and there is a discharge of blood or watery humours from the womb.

To prevent abortion, we would advise women of a weak or relaxed habit to use solid food, avoiding great quantities of tea, and other weak and watery liquors; to rise early and go soon to bed; to shun damp houses; to take frequent exercise in the open air, but to avoid fatigue; and never to go abroad in damp foggy weather, if they can shun it; and to take the electuary of cinchona with a large cupful of lime-water, with which a little milk may be mixed, three times a-day: two or three glasses of port wine may be drank in the course of the day, and she may go into the cold bath, or use the shower bath, once or twice a-week.

Women of a full habit ought to use a spare diet, avoiding strong liquors, and every thing that may tend to heat the body, or increase the quantity of blood. Their diet should be of an opening nature, consisting principally of vegetable substances. Every woman with child ought to be kept cheerful and easy in her mind. Her appetite, even though depraved, ought to be indulged as far as prudence will permit. For restraining hæmorrhage in these cases, the application of cloths dipped in cold water to the back and external parts will have a much better effect than internal astringents, and ought always to be had recourse to; but the most effectual local method of stopping the hæmorrhage is by plugging the vagina. This is best done by taking a pretty large piece of soft cloth, and dipping it in oil, and then wringing it gently; it is to be introduced portion after portion, until the lower part of the vagina be well filled: the remainder is then to be pressed firmly on the orifice, and held there for some time. This gives no pain, produces no irritation, and it acts by giving the effused blood time to coagulate.

To restrain the velocity of the circulation, and promote a determination to the skin, exhibit a quarter to half a grain of the powder of fox-glove with the eighth part of a grain of tartarized antimony every night at bed-time.

Dr. Burns, a professor of midwifery, has observed, that sometimes it is the stomach, not the uterus, which is irritable; and the person is often very sick, takes little food, and digests ill. A small blister applied to the pit of the stomach often relieves this: a little of the compound tincture of cinchona, taken three or four times a-day, is serviceable; or a few drops of muriated iron in a tumbler of water impregnated with fixed air, or in pure water.

When the woman is very restless and feverish, especially if she be of a full habit, immediate relief is given by bleeding, and afterwards she may have for some time, every night, half a grain of the powder of the fox-glove, with two grains of the extract of henbane; but in every species of abortion, and especially in cases requiring the use of such deleterious medicines as we have just mentioned, we earnestly recommend recourse to be had to the best medical assistance that her situation and circumstances permit.

When any signs of abortion appear, the woman ought to be laid in bed on a mattress, with her head low. She should be kept quiet, and her mind soothed and comforted. She ought not to be kept too hot, nor to take any thing of a heating nature. Her food should consist of broths, rice, and milk, jellies, gruels made of oatmeal, and the like, all of which ought to be taken cold.

If she be able to bear it, she should lose at least half a pound of blood from the arm. Her drink ought to be barley-water sharpened with juice of lemon; or she may take half a drachm of powdered nitre, in a cup of water-gruel, every five or six hours. If the woman be seized with a violent looseness, she ought to drink the decoction of calcined hartshorn prepared. If she be affected with vomiting, let her take frequently two table-spoonfuls of the saline mixture. In general, opiates are of service; but they should always be given with caution.

Sanguine robust women, who are liable to miscarry at a certain time of pregnancy, ought always to be bled a few days before that period arrives. By this means, and observing the regimen above prescribed, they might often escape that misfortune.

Though we recommend due care for preventing abortion, we would not be understood as restraining pregnant women from their usual exercises. This would generally operate the quite contrary way. Want of exercise not only relaxes the body, but induces a plethora, or too great a fulness of the vessels, which are the two principal causes of abortion. There are, however, some women of so delicate a texture, that it is necessary for them to avoid almost every kind of exercise during the whole period of pregnancy.

OF CHILD-BIRTH.

Many diseases proceed from the want of due care in child-bed, and the more hardy part of the sex are most apt to despise the necessary precautions in this state. This is peculiarly the case with young wives. They think when the labour pains are ended, the danger is over; but in truth it may only then be said to be begun. Nature, if left to herself, will seldom fail to expel the fœtus; but proper care and management are certainly necessary for the recovery of the mother. No doubt mischief may be done by too much as well as by too little care. Hence females who have the greatest number of attendants in child-bed generally recover worst. But this is not peculiar to the state of child-bed. Excessive care always defeats its own intention, and is generally more dangerous than none at all.

Though the management of women in child-bed has been practised as an employment since the earliest accounts of time, yet it is still in most countries on a very bad footing. Few women think of following this employment till they are reduced to the necessity of doing it for bread. Hence not one in a hundred of them have any education, or proper knowledge of their business. It is true, that Nature, if left to herself, will generally expel the fœtus; but it is equally true, that most women in child-bed require to be managed with skill and attention, and that they are often hurt by the superstitious prejudices of ignorant and officious midwives. The mischief done in this way is much greater than is generally imagined, most of which might be prevented by allowing no women to practise midwifery but such as are properly qualified. Were due attention paid to this, it would be the means of saving many lives.

During actual labour, nothing of a heating nature ought to be given. The woman may now and then take a little panado, and her drink

ought to be toast and water, or thin groat-gruel. Spirits, wines, cordial-waters, and other things which are given with a view to strengthen the mother and promote the birth, for the most part tend only to increase the fever, inflame the womb, and retard the labour. Besides they endanger the woman afterwards, as they often occasion violent and mortal hæmorrhages, or dispose her to eruptive and other fevers.

When the labour proves tedious and difficult, to prevent inflammations, it will be proper to bleed. An emollient clyster ought likewise frequently to be administered, and the patient should sit over the steams of warm water. The passage ought to be gently rubbed with a little soft POMATUM or fresh butter, and cloths wrung out of warm water applied over the belly. If nature seems to sink, and the woman is greatly exhausted with fatigue, a draught of generous wine, a drop or two of the oil of cinnamon on sugar, or some other cordial, may be given, but not otherwise. These directions are sufficient in natural labours; and in all preternatural cases, a skilful surgeon, or man-midwife, ought to be called as soon as possible.

Women who have hard labours, have experienced much benefit by taking repeated doses of the oil of almonds: the best means however of lessening the pains of child-birth are occasional blood-letting during the period of gestation; the frequent use of oily purgative lavements, accompanied by a low diet ten or fourteen days before delivery, but especially blood-letting AT THE TIME OF LABOUR, to the extent of thirty, forty, or near fifty ounces, which by diminishing the rigidity of the parts facilitates their distention; so that a lingering labour, which had continued for thirty-six hours, after the free use of the lancet, has speedily finished by the expulsion of the child without the least degree of pain. The severity and frequency of after-pains may be diminished by giving every two, three, or four hours, ten, or if necessary fifteen or twenty, drops of the TINCTURE OF OPIUM in two or three table-spoonfuls of mint-tea or cinnamon water.

After delivery, the woman ought to be kept as quiet and easy as possible. Take spermaceti dissolved in the yolk of an egg two drachms, compound powder of contrayerva one drachm, purified nitre one scruple, simple syrup one ounce, pennyroyal water seven ounces; make a mixture, of which exhibit three table-spoonfuls every five or six hours; and if pain and restlessness continue long, a few drops of the TINCTURE OF OPIUM may be added to each dose. Her food should be light and thin; as gruel, panado, &c. and her drink weak and diluting. To this rule however there are exceptions: some women cannot be supported in child-bed by an abstemious diet; to such, a glass of wine and a bit of chicken may be allowed.

Sometimes an excessive hæmorrhage or flooding happens after delivery. In this case the patient should be laid with her head low, kept cool, and be in all respects treated as for an excessive flux of the menses. If the flooding proves violent, linen cloths which have been wrung out of a mixture of equal parts of vinegar and water, or red wine, should be applied to the belly, the loins, and the thighs: these must be changed as they grow dry, and may be discontinued as soon as the flooding abates.

In a violent flooding after delivery, I have seen very good effects

from the following mixture: Take of pennyroyal water, simple cinnamon water, and syrup of white poppies, each two ounces, elixir of vitriol a drachm. Mix, and take two table-spoonfuls every two hours or oftener if necessary.

If there be violent pains after delivery, the patient ought to drink plentifully of warm diluting liquors, as groat-gruel, or tea with a little saffron in it; and to take small broths, with carraway-seeds, or a bit of orange-peel in them: an ounce of the oil of sweet almonds may likewise be taken in a cup of any of the above liquors; and if the patient be restless, a spoonful of the syrup of white poppies may now and then be mixed with a cup of her drink. If she be hot or feverish, one of the following powders may be taken in a cup of her usual drink every five or six hours. Take of crab claws prepared half an ounce, purified nitre two drachms, saffron powdered half a drachm; rub them together in a mortar, and divide the whole into eight or nine doses.

When the patient is low spirited, or troubled with hysterical complaints, she ought to take frequently ten, fifteen, or twenty drops of the tincture of asafœtida in a cup of pennyroyal tea.

An inflammation of the womb is a dangerous and not unfrequent disease after delivery. It is known by pains in the lower part of the belly, which are greatly increased upon touching; by the tension or tightness of the parts; great weakness; change of countenance; a constant fever, with a weak and hard pulse; a slight delirum, or raving: sometimes incessent vomiting; a hiccup; a discharge of reddish, stinking, sharp water from the womb; an inclination to go frequently to stool; a heat, and sometimes total suppression of urine.

This must be treated, like other inflammatory disorders, by bleeding and plentiful dilution. The drink may be thin gruel or barley-water: in a cup of which half a drachm of nitre may be dissolved, and taken three or four times a-day. Clysters of warm milk and water must be frequently administered: and the belly should be fomented by cloaths wrung out of warm water, or by applying bladders filled with warm milk and water to it.

A suppression of the lochia, or usual discharges after delivery, and the milk-fever, must be treated nearly in the same manner as an inflammation of the womb. In all these cases, the safest course is plentiful dilution, gentle evacuations, and fomentations of the parts affected. In the milk-fever, the breasts may be embrocated with a little warm linseed-oil, or the leaves of red cabbage may be applied to to them. The child should be often put to the breast, or it should be drawn by some other person.

Nothing would tend more to prevent the milk-fever than putting the child early to the breast. The custom of not allowing children to suck for the first two or three days is contrary to Nature and common sense, and is very hurtful both to the mother and child.

Every mother who has milk in her breast ought either to suckle her own child, or to have her breast frequently drawn, at least for the first month. This would prevent many of the diseases which prove fatal to women in child-bed.

When an inflamation happens in the breast attended with redness, hardness, and other symptoms of suppuration, the safest application is a poultice of bread and milk, softened with oil or fresh butter. This

may be renewed twice a-day, till the tumor be either discused or brought to suppuration. The use of repellents in this case is very dangerous; they often occasion fevers, and sometimes cancers; whereas a suppuration is seldom attended with any danger, and has often the most salutary effects.

When the nipples are fretted or chapt, they may be anointed wtih a mixture of oil and bees-wax, or a little powdered gum-arabic may be sprinkled on them. I have seen Hungary water applied to the nipples have a very good effect. Sould the complaint prove obstinate, a cooling purge may be given, which generally removes it.

The miliary fever is a disease incident to women in child-bed; but as it has been treated of already, we shall take no further notice of it. The celebrated Hoffman observes, That this fever of child-bed women might generally be prevented, if they, during pregnancy, were regular in their diet, used moderate exercise, took now and then a gentle laxative of manna, rhubarb, or cream of tartar; not forgetting to bleed in the first months, and avoid all sharp air. When the labour is coming on it is not to be hastened with forcing medicines, which inflame the blood and humours, or put them into unnatural commotions. Care should be taken, after the birth, that the natural excretions proceed regularly; and if the pulse be quick, a little nitrous powder, or some other cooling medicines, should be administered.

The most fatal disorder consequent upon delivery is the puerperal or child-bed fever. It generally makes its attack upon the second or third day after delivery. Sometimes indeed it comes on sooner, and at other times, though rarely, it does not apper before the fifth or sixth day.

It begins, like most other fevers, with a cold or shivering fit, which is succeeded by restlessness, pain of the head, great sickness at the stomach, and bilious vomiting. The pulse is generally quick, the tongue dry, and there is a remarkable depression of spirits and loss of strength. A great pain is usually felt in the back, hips, and region of the womb; a sudden change in the quantity or quality of the LOCHIA also takes place; and the patient is frequently troubled with a TENESMUS, or constant inclination to go to stool. The urine, which is very high coloured, is discharged in small quantity, and generally with pain. The belly sometimes swells to a considerable bulk, and becomes susceptible of pain from the slightest touch. When the fever has continued for a few days, the symptoms of inflammation usually subside, and the disease acquires a more putrid form. At this period, if not sooner, a bilious or putrid looseness, of an obstinate and dangerous nature, comes on, and accompanies the disease through all its future progress.

There is not any disease that requires to be treated with more skill and attention than this; consequently the best assistance ought always to be obtained as soon as possible. In women of a plethoric constitution, bleeding will generally be proper at the beginning; it ought however to be used with caution, and not to be repeated unless where the signs of inflammation rise high; in which case it will also be necessary to apply a blistering plaster to the region of the womb.

During the rigour, or cold fit, proper means should be used to abate its violence and shorten its duration. For this purpose the patient may drink freely of warm diluting liquors, and, if low, may

take now and then a cup of wine-whey: warm applications to the extremities, as heated bricks, bottles or bladders filled with warm water, and such like, may also be used with advantage.

Emollient clysters of milk and water, or of chicken water, ought to be frequently administered through the course of the disease. These prove beneficial by promoting a discharge from the intenstines, and also by acting as a kindly fomentation to the womb and parts adjacent. Great care however is requisite in giving them, on account of the tenderness of the parts in the PELVIS at this time.

To evacuate the offending bile from the stomach, a vomit is generally given. But as this is apt to increase the irritability of the stomach, already too great, it will be safer to omit it, and to give in its stead a gentle laxative, as a decoction of tamarinds with senna, which will both tend to cool the body, and to procure a free discharge of the bile. Neither vomits nor purges, however, should be administered to women in child-bed without the utmost caution; yet as after labour there is a particular increase of heat and disposition to fever, a costive state of the body may prove, without seasonable relief, fatal in the issue. Were this dangerous habit guarded against by proper attention before and after delivery, child-bed indispositions would be less frequent than they are.

The saline draught, so effectual against vomiting, so efficacious in obviating fever, and correcting any putrescent tendency, may be given every three or four hours. To a scruple of PREPARED KALI, or salt of tartar, previously dissolved in two table-spoonfuls of spring water, add a table-spoonful of fresh lemon juice: as soon as the frothing or ebullition begins, it is to be immediately drank. To render it aperient, two drachms of the tincture of rhubarb may be added to each draught; but should the saline mixture run off by stool, omit the tincture of rhubarb; and, especially if the patient is restless, a few drops of TINCTURE OF OPIUM, or some syrup of white poppies, may occasionally be added. After proper evacuations, and an abatement of febrile heat, the saline mixture may be ommitted, and the following astringent, antiseptic draught given to corroborate the relaxed viscera: Take two grains of alum, half a ounce of fresh orange juice, two drachms of the COMPOUND TINCTURE OF CINCHONA (commonly called Huxham's tincture of bark), and two ounces and a half of spring water; mix, and exhibit it every six hours.

If the stools should prove so frequent as to weaken and exhaust the patient, a starch clyster may be administered as occasion shall require; and the drink may be a decoction of hartshorn, or rice-water, in every English pint of which half an ounce of gum-arabic has been dissolved. Should these fail, recourse must be had to a bolus composed of half a drachm of powdered Columbo root, with a grain of opium, which may be given every three or four hours, and occasionally the chalk mixture seven ounces, tiucture of catechu six drachms, opiate confection two drachms: mix, and give a table-spoonful or two after every loose stool. Where there is much purging, an emollient clyster may be thrown up with advantage once or twice in twenty four hours; and if with the diarrhœa should be much tenesmus, lavements, with thirty or forty drops of the tincture of opium, will be necessary, but not otherwise.

Though in general the food ought to be light and the drink diluting, yet when the disease has been long protracted, and the patient is

greatly spent by evacuations, it will be necessary to support her with nourishing diet and generous cordials.

It was observed, that this fever, after continuing for some time, often acquires a putrid form. In this case the Peruvian bark must be given, either by itself, or joined with cordials, as circumstances may require. As the chinchona in substance will be apt to purge, it may be given in decoction or infusion mixed with the tincture of roses, or other gentle astringents; or a scruple of the extract of cinchona, with half an ounce of spirit of cinnamon, two ounces of common water, and ten drops of tincture of opium, may be made into a draught, and given every second, third, or fourth hour, as shall be found necessary.

When the stomach will not bear any kind of nourishment, the patient may be supported for some time by clysters of beef-tea or chicken-water.

To avoid this fever, every woman in child-bed ought to be kept perfectly easy; her food should be light and simple, and her bed-chamber cool, and properly ventilated. There is not any thing more hurtful to a woman in this situation than being kept too warm. She ought not to have her body bound too tight, nor to rise too soon from bed, after delivery: catching cold is also to be avoided; and a proper attention should be paid to cleanliness.

To prevent the milk-feaver, the breasts ought to be frequently drawn; and if they are filled previous to the onset of a fever, they should, upon its first appearance, be drawn, to prevent the milk from becoming acrid, and its being absorbed in this state. Costiveness is likewise to be avoided. This will be best affected by the use of mild clysters and a laxative diet.

We shall conclude our observations on child-bed women by recommending it to them, above all things, to beware of cold. Poor women, whose circumstances oblige them quit their bed too soon, often contract diseases from cold, of which they never recover. It is a pity that the poor are not better taken care of in this situation.

But the better sort of women run the greatest hazard from too much heat. They are generally kept in a sort of bagnio for the first eight or ten days, and then dressed out to see company. The danger of this conduct must be obvious to every one.

The superstitious custom of obliging women to keep the house till they go to church is likewise a very common cause of catching cold.

All churches are damp, and most of them cold; consequently they are the very worst places to which a woman can go to make her first visit, after having been confined in a warm room for a month.

OF BARRENNESS.

Barrenness may be very properly reckoned among the diseases of females, as few married women who have not children enjoy a good state of health. It may proceed from various causes, as high living, grief, relaxation, &c., but it is chiefly owing to an obstruction or irregularity of the menstrual flux.

It is very certain that high living vitiates the humours, and prevents secundity. We seldom find a barren women among the labouring

poor, while nothing is more common among the rich and affluent. The inhabitants of every country are prolific in proportion to their poverty; and it would be an easy matter to adduce many instances of women, who, by being reduced to live entirely upon a milk and vegetable diet, have conceived and brought forth children; though they never had any before. Would the rich use the same sort of food and exercise as the better sort of peasants, they would seldom have cause to envy their poor vassals and dependants the blessing of a numerous and healthy offspring, while they pine in sorrow for the want of even a single heir to their extensive domains.

Affluance begets indolence, which not only vitiates the humours, but induces a general relaxation of the solids; a state highly unfavourable to procreation. To remove this, we would recommend the following course: First, sufficient exercise in the open air; secondly, a diet consisting chiefly of milk and vegetables; thirdly, the use of astringent medicines, as steel, alum, dragon's blood, elixir of vitriol, the Spa or Tunbridge waters, Peruvian bark, &c.; and lastly, above all, the cold bath.

Barrenness is often the consequence of grief, sudden fear, anxiety, or any of the passions which tend to obstruct the menstrual flux. When barrenness is suspected to proceed from affections of the mind the person ought to be kept as easy and cheerful as possible; all disagreeable objects are to be avoided, and every method taken to amuse and entertain the fancy.

Dr. Cheyne avers, that want of children is oftener the fault of the male than of the female, and strongly recommends a milk and vegetable diet to the former as well as the latter; adding, that his friend Dr. Taylor, whom he calls the Milk-doctor of Croydon, had brought sundry opulent families in his neighbourhood, who had continued some years after marriage without progeny, to have several fine children; by keeping both parents, for a considerable time, to a milk and and vegetable diet.

CHAP. XLIX.

DISEASES OF CHILDREN.

MISERABLE indeed is the lot of man in the state of infancy! He comes into the world more helpless than any other animal, and stands much longer in need of the protection and care of his parents; but, alas! this care is not always bestowed upon him; and when it is, he often suffers as much from improper management as he would have done from neglect. Hence the officious care of parents, nurses, and midwives, become one of the most fruitful source, of the disorders of infants.

Of the officious and ill-judged care of midwifes we shall adduce only one instance, viz. the common practice of torturing infants by

squeezing their breasts, to draw off the milk, as they call it. Though a small quantity of moisture is generally found in the breasts of infants, yet, as they are certainly not intended to give suck, this ought never to be drawn off. I have seen this cruel operation bring on hardness, inflammation, and suppuration of the breasts, but never knew any ill consequences from its being omitted. When the breasts are hard, the only application that we would recommend is a soft poultice, or a little of the diachylon plaster spread thin upon a bit of soft leather, about the size of half a crown, and applied over each nipple. These may be suffered to continue till the hardness disappears.

It must be obvious to every attentive person, that the first diseases of infants arise chiefly from their bowels. Nor is this in the least to be wondered at, as they are in a manner poisoned with indigestible drugs and improper diet as soon as they come into the world. Every thing that the stomach cannot digest may be considered as a poison; and unless it cannot be thrown up, or voided by stool, it must occasion sickness, gripes, spasmodic affections of the bowels, or what the good women call inward fits, and at last convulsions and death.

As these symptoms evidently arise from somewhat that irritates the intestines, doubtless the proper method of cure must be to expel it as soon as possible. The most safe and effectual method of doing this is by gentle vomits. Five or six grains of the powder of ipecacuanha may be mixed in two table-spoonfuls of water, and sweatened with a little sugar. A tea-spoonful of this may be given to the infant every quarter of an hour till it operates; or, what will more certainly answer the purpose, a grain of emetic tartar may be dissolved in three ounces of water, sweetened with a little syrup, and given as above. Those who are unwilling to use the TARTARISED ANTIMONY may give six or seven drops of antimonial wine in a tea-spoonful of water or thin gruel. Small doses of the epicacuanha wine will be found more gentle than any of the above, and ought to be preferred.

These medicines will not only cleanse the stomach, but will generally likewise open the body. Should this however not happen and if the child be costive, some gentle purge will be necessary: for this purpose, some manna and pulp of cassia may be dissolved in boiling water, and given in small quantities till it operates; or, what will answer rather better, a few grains of magnesia alba may be mixed in any kind of food that is given to the child, and continued till it has the desired effect. If these medicines be properly administered, and the child's belly and limbs frequently rubbed with a warm hand before the fire, they will seldom fail to relieve those affections of the stomach and bowels from which infants suffer so much.

These general directions include most of what can be done for relieving the interal disorders of infants. They will likewise go a considerable way in alleviating those which appear externally, as the rash, gum, or fellon, &c. These, as was formerly observed, are principally owing to too hot a regimen, and consequently will be most effectually relieved by gentle evacuations. Indeed, evacuations of one kind or other constitute a principal part of the medicine of infants, and will seldom, if administered with prudence, in any of their diseases, fail to give relief.

OF THE MECONIUM.

The stomach and bowels of a new-born infant are filled with a blackish coloured matter of the consistence of syrup, commonly called the meconium. This is generally passed soon after the birth, by the mere effort of Nature; in which case it is not necessary to give the infant any kind of medicine. But if it should be retained, or not sufficiently carried off, a little manna or magnesia alba may be given, as mentioned above; or, if these should not be at hand, a common spoonful of whey, sweetened with a little honey or raw sugar; or oil of sweet almonds and syrup of roses of each six drachms, mixed, and a tea-spoonful given as often as occasion may require.

The most proper medicine for expelling the meconium is the mother's milk, which is always at first of a purgative quality. Were children allowed to suck as soon as they shew an inclination for the breast, they would seldom have occasion for medicines to discharge the meconium; but even where this is not allowed, they ought never to have dabs of syrup, oils, and indigestible stuff, crammed down their throats, whereby their tender organs are injured, the circulating fluids heated and thrown into irregular commotions, that sometimes occasion obstructions, at other, irritations in the bowels, and convulsions that cause "THOUSANDS TO RETIRE FROM yet UNTASTED LIFE."

OF THE APHTHAE OR THRUSH.

The aphthæ are little whitish or yellow ulcers affecting the whole inside of the mouth, tongue, throat and stomach of infants. Sometimes they reach through the whole intestinal canal, in which case they are very dangerous, and often put an end to the infant's life.

If the aphthæ are of a pale colour, pellucid, few in number, soft, superficial, and fall easily off, they are not dangerous; but if opake, yellow, brown, black, thick, or running together, they ought to be dreaded.

It is generally thought that the aphthæ owe their origin to acid humours; we have reason however to believe they are more frequently owing to too hot a regimen both of the mother and child. It is a rare thing to find a child who is not dosed with wine, punch, or some other hot and inflaming liquors, almost as soon as it is born. It is well known that these will occasion inflammatory disorders even in adults: is it any wonder, then, that they should heat and inflame the tender bodies of infants, and set as it were the whole constitution on a blaze?

The most proper medicines for the aphthæ are vomits, such as have been already recommended, and gentle laxatives. Five grains of rhubarb and half a drachm of MAGNESIA ALBA may be rubbed together, and divided into six doses, one of which may be given to

the infant every four or five hours till they operate. These powders may either be given in the child's food, or a little of the syrup of pale roses, and may be repeated as often as is found necessary to keep the body open. It is common in this case to administer calomel; but as that medicine sometimes occasions gripes, it ought always to be given to infants with caution.

Many things have been recommended for gargling the mouth and throat in this disease, but it is not easy to apply these in very young children; we would therefore recommend to the nurse the use of topical applications, such as either the expressed juice of roasted turnips, mulberries, raspberries or, black currants, sweetened with honey or sugar-candy, or to rub the child's mouth frequently with a little borax and honey; or with the following mixture: Take fine honey an ounce, borax a drachm, burnt alum half a drachm, rose water two drachms; mix them together. A very proper application in this case is a solution of ten or twelve grains of VITRIOLATED ZINC in eight ounces of barley-water. These may be applied with the finger, a camel's hair pencil, or by means of a bit of soft rag tied to the end of a probe.

The acid and watery purgings in this complaint may be relieved by clysters of barley-water with a little magnesia and syrup of white poppies.

OF ACIDITIES.

THE food of children being for the most part of an acescent nature, it readily turns sour upon the stomach, especially if the body be any way disordered. Hence most diseases of children are accompanied with evident signs of acidity, as green stools, gripes, &c. These appearances have induced many to believe that all the diseases of children were owing to an acid abounding in the stomach and bowels; but whoever considers the matter attentively, will find that these symptoms of acidity are oftener the effect than the cause of their disease.

Nature evidently intended that the food of children should be acescent; and unless the body be disordered, or the digestion hurt, from some other cause, we will venture to say that the acescent quality of their food is seldom injurious to them. Acidity, however, is often a symptom of disorders in children, and, as it is sometimes a troublesome one, we shall point out the method of relieving it.

When green stools, gripes, purgings, sour smells, &c. shew that the bowels abound with an acid, the child should have a little small broth, with light white bread in it; and should have sufficient exercise in order to promote the digestion. It has been customary in this case to give the chalk, crabs eyes, and other testaceous powders. These, indeed, by their absorbent quality, may correct the acidity; but they are attended with this inconvenience, that they are apt to lodge in the bowels, and occasion costiveness, which may prove very hurtful to the infant. For this reason they should never be given unless mixed with purgative medicines; as rhubarb, manna, or such like.

The best medicine which we know, in all cases of acidity, is that fine insipid powder called MAGNESIA ALBA. It purges, and at the same time

corrects the acidity : by which means it not only removes the disease, but carries off its cause. It may be given in any kind of food, or in a LAXATIVE ABSORBENT MIXTURE, as recommended in the Appendix.

When an infant is troubled with gripes, it ought not at first to be dosed with brandy, spiceries, and other hot things; but should have its body opened with an emollient clyster, or the medicine mentioned above; and at the same time a little brandy may be rubbed on its belly with a warm hand before the fire. I have seldom seen this fail to ease the gripes of infants. If it should happen, however, not to to succeed, a little brandy or other spirits may be mixed with thrice the quantity of warm water, and a tea-spoonful of it given frequently till the the infant be easier. Sometimes a little peppermint-water will answer this purpose very well.

OF GALLING AND EXCORIATION.

THESE are very troublesome to children. They happen chiefly about the groin and wrinkles of the neck, under the arms, behind the ears, and in other parts that are moistened by the sweat or urine.

As these complaints are, in a great measure, owing to want of cleanliness, the most effectual means of preventing them are, to wash the parts frequently with cold water, to change the linen often, and in a word, to keep the child in all respects thoroughly clean. When this is not sufficient, the excoriated parts may be sprinkled with absorbent or drying powders; as burnt hartshorn, tutty, chalk, crab's claws prepared, and the like. When the parts affected are very sore, and tend to a real ulceration, it will be proper to anoint the place with the ointment of spermaceti, or with the white liniment mentioned in the Appendix. If the parts be washed with spring-water, in which a little vitriolated zinc (twelve grains to eight ounces of water) has been dissolved, it will dry and heal them very powerfully. One of the best applications for this purpose is to dissolve some fuller's earth in a sufficient quantity of hot water, and after it has stood till it is cold, to rub it gently upon the galled parts once or twice a-day.

OF STOPPAGE OF THE NOSE.

THE nostrils of infants are often plugged up with a gross MUCUS which prevents their breathing freely, and likewise renders it difficult or them to suck or swallow.

Some in this case order, after a suitable purge, two or three grains of white vitriol dissolved in half an ounce of marjoram-water, and filtered, to be applied now and then to the nostrils with a linnen rag Wedellus says, if two grains of white vitriol, and the same quantity of elaterium, be dissolved in half an ounce of marjoram-water, and applied to the nose, as above directed, that it brings away the mucus without sneezing.

In obstinate cases these medicines may be tried; but I have never found any thing necessary besides rubbing the nose at bed-time with

a little sweet oil, or fresh butter. This resolves the filth, and renders the breathing more free.

OF VOMITING.

From the delicate state of children, and the great sensibility of their organs, a vomiting or looseness may be induced by any thing that irritates the nerves of the stomach or intestines. Hence these disorders are much more common in childhood than in the more advanced periods of life. They are seldom however dangerous, and ought never to be considered as diseases, unless when they are violent, or continue so long as to exhaust the strength of the patient.

Vomiting may be excited by an over-quantity of food; by food that is of such a nature as to irritate the nerves of the stomach too much; or by the sensibility of the nerves being so much increased as to render them unable to bear the stimulus of even the mildest aliment.

When vomiting is occasioned by too much food, it ought to be promoted, as the cure will depend upon cleansing the stomach. This may be done either by a few grains of ipecacuanha, or a weak solution of tartarized antimony, as mentioned before. When it is owing to food of an acrid or irritating quality, the diet ought to be changed, and aliment of a milder nature substituted in its stead.

When vomiting proceeds from an increased degree of sensibility, or too great an irritability of the nerves of the stomach, such medicines as have a tendency to brace and strengthen that organ, and to abate its sensibility, must be used. The first of these intentions may be answered by a slight infusion of the Peruvian bark, with the addition of a little rhubarb and orange-peel; and the second by the saline draughs, to which a few drops of tincture of opium may occasionally be added.

In obstinate vomitings the operation of internal medicines may be assisted by aromatic fomentations made with wine, applied warm to the pit of the stomach; or the use of the laudanum-plaster, with the addition of a little theriaca, or Venice treacle.

OF A LOOSENESS.

A looseness may generally be reckoned salutary when the stools are sour, slimy, green, or curdled. It is not the discharge, but the production of such stools, which ought to be remedied. Even where the purging is thin and watery, it ought not to be checked too suddenly, as it often proves critical, especially when the child has caught cold, or an eruption on the skin has disappeared. Sometimes an evacuation of this kind succeeds a humid state of the atmosphere, in which case it may also prove of advantage, by carrying off a quantity of watery humours, which would otherwise tend to relax the habit.

As the principal intention of the cure of a looseness is to evacuate

the offending matter, it is customary to give the patient a gentle vomit of ipecacuanha, and afterwards to exhibit small and frequent doses of rhubarb; interposing absorbent medicines to mitigate the acrimony of the humours. The best purge, however, in this case, is magnesia alba. It is at the same time absorbent and laxative, and operates without exciting gripes.

The wine of antimony, which acts both as an emetic and purge is also an excellent medicine in this case. By being diluted with water, it may be proportioned to the weakest constitution; and, not being disagreeable to the palate, it may be repeated as often as accasion requires. Even one dose will frequently mitigate the disease, and pave the way for the use of absorbents. If, however, the patients strength will permit, the medicine ought to be repeated every six or eight hours, till the stools begin to assume a more natural appearance; afterwards a longer space may be allowed to intervene between the doses. When it is necessary to repeat the medicine frequently, the dose ought always to be a little increased, as its efficacy is generally diminished by use.

Some, upon the first appearance of a looseness, fly immediately to the use of absorbent medicines and astringents. If these be administered before the offending humours are discharged, though the disease may appear to be mitigated for a little time, it soon afterwards breaks forth with greater violence, and often proves fatal. After proper evacuations, however, these medicines may be administered with considerable advantage.

Should any gripings or restlessness remain after the stomach and bowels have been cleansed, a tea-spoonful of the syrup of poppies may be given in a little simple cinnamon-water three or four times a-day till these symptoms have ceased; or the following mixture may be given with advantage: Take of crab's claws prepared three drachms, gum-arabic in powder two drachms, cinnamon-water and mint-water each six table-spoonfuls; refined sugar three drachms; mix, and after shaking the phial, give a pap-spoonful or more, frequently. If the discharge still continue by reason of the great irritability of the intestines, three or four drops of the tincture of opium, or a tea-spoonful of the syrup of white poppies, may be given with this mixture every four hours.

OF ERUPTIONS.

Children, while on the breast are seldom free from eruptions of one kind or other. These, however, are not often dangerous, and ought never to be dried up but with the greatest caution. They tend to free the bodies of infants from hurtful humours, which, if retained, might produce fatal disorders.

The eruptions of children are chiefly owing to improper food and neglect of cleanliness. If a child be stuffed at all hours with food that its stomach is not able to digest, such food, not being properly assimilated instead of nourishing the body, fills it with gross humours. These must either break out in form of eruptions upon the skin, or remain in the body, and occasion fevers and other internal disorders. That neglect of cleanliness is a very general cause of eruptive disor-

ders, must be obvious to every one. The children of the poor, and of all who dispise cleanliness, are almost constantly found to swarm with vermin, and are generally covered with the scab, itch, and other eruptions.

When eruptions are the effect of improper food, or want of cleanliness, a proper attention to these alone will generally be sufficient to remove them. If this should not be the case, some drying medicines will be necessary. When they are applied, the body ought at the same time to be kept open, and cold is carefully to be avoided. We know no medicine that is more safe for drying up cutaneous eruptions than sulphur, provided it be prudently used. A little of the flowers of sulpur may be mixed with fresh butter, oil, or hog's lard, and the parts affected frequently touched with it.

The most obstinate of all the eruptions incident to children are the TINEA CAPITIS, or scabbed head, and chilblains. The scabbed head is often exceeding difficult to cure, and sometimes indeed the cure proves worse than the disease. I have frequently known children seized with internal disorders, of which they died soon after their scabbed heads had been healed by the application of drying medicines. The cure ought always first to be attempted by keeping the head very clean, cutting off the hair, combing and brushing away the scabs, &c. If this is not sufficient, let the head be shaved once a week; prevent the access of air to the sores by a bladder properly fitted to the head; wash it daily with soap suds, or salt and water, or a solution of three drachms of SULPHURATED KALI in a pint of lime-water, and gently anoint with either the ointment of tar, or the ointment of sulphur. And if there be proud flesh, it should be touched with a bit of blue vitriol, or sprinkled with a little burnt alum. While these things are doing, the patient must be confined to a regular light diet; the body should be kept gently open by the flowers of sulphur, or by small doses of calomel, and cold, as far as possible, ought to be avoided. To prevent any bad consequences from stopping this discharge, it will be proper, especially in children of a gross habit, to make an issue in the neck or arm, which may be kept open till the patient becomes more strong, and the constitution be somewhat mended.

Chilblains commonly attack children in cold weather. They are generally occasioned by the feet or hands being kept long wet or cold, and afterwards suddenly heated. When children are cold, instead of taking exercise to warm themselves gradually, they run to the fire. This occasions a sudden rarefaction of the humours, and an infarction of the vessels; which, being often repeated, the vessels are at last over distended, and forced to give way.

To prevent it, violent cold and sudden heat must be equally avoided. When the parts begin to look red and swell, the patient ought to be purged, and to have the affected parts frequently rubbed with oil of turpentine, mustard and brandy, or something of a warming nature. They ought likewise to be covered with flannel, and kept warm and dry. Some apply warm ashes between cloths to the swelled parts, which frequently help to reduce them. The following embrocation generally proves a remedy for this irksome complaint: dissolve two drachms of alum in half a pint of vinegar, to which add half a pint of spirits of wine; apply it by means of linen rags kept wet on the diseased parts. When there is a sore, it must be dressed

with CALAMINE CERATE, the ointment of tutty, or the OINTMENT OF ACETATED CERUSE. These sores are indeed troublesome, but seldom dangerous. They generally heal as soon as the warm weather sets in.

OF THE CROUP.

THIS disease first appeared, about half a century ago, on the north-east coast of England: it is an inflammation of the TRACHEA, or wind-pipe, the tube through which the air passes to and from the lungs. It happens only to children, and rarely occurs till after they are weaned: the younger they are after this period, they are the more liable to this disease, which is often violent in its attack, and frequently, by a preternatural secretion of matter and mucus, produces such an obstruction of the passage of the air, as suffocates and proves suddenly fatal to the patient. But if it terminates favourably, the inflammation is resolved, as is likewise the spasm or cramp at the top of the wind-pipe, sometimes with a considerable discharge of phlegm from the throat, and sometimes with little more than happens in a common cold. The croup seems to be a species of spasmodic asthma, attended with very acute and violent catarrhal symptoms: it generally prevails in cold and wet seasons, is most common near the sea coast, and in low marshy countries. Children of a gross and lax habit are most liable to it: its attacks are frequently repeated on the same child, and it mostly assails the patient in the night, after he has been much exposed to damp and cold, or to easterly winds, the preceding day. Damp houses, wet feet, thin shoes, wet clothes, or whatever obstructs the perspiration, may occasion the croup, which has not been known to attack children above ten or twelve years of age. It is attended with hoarseness, wheezing, and a dry cough, though sometimes it is accompanied with purulent expectoration, and a pulse hard, full, and strong; the breathing is laborious, and performed with a peculiar kind of croaking noise that may be heard a consderable distance; the voice is sharp and shrill. It often happens that this disease puts on for some days the appearance of a common catarrh, but in which the difficulty of breathing increases generally in the evening, and a sense of suffocation is perceptible, attended with a small quick pulse often 130, 140, or 150 in a minute. Slight rigors, succeeded by heat and flushing in the face, are frequent.

When the child is seized with these symptoms, immediate application should be made for medical assistance: the most active remedies must be promptly employed, for the disease often completes its course in three or four days. His feet should immediately be immersed in warm water. If he is of a plethoric habit, as is mostly the case, he must be bled. Upon the first attack of the disease, vomiting, immediately after bleeding, seems to be of considerable use, and sometimes suddenly removes the disease. It is advisable to have recourse to those medicines which operate most expeditiously, such as VITRIOLATED ZINC, even in large doses. When a tasteless emetic is preferred, vomit with the solution of tartarized antimony: it may be made more detergent and expectorant by adding to it a

proper quantity of the oxymel of squills. To assist in resolving and destroying the purulent matter, or tubular membranous substance that cause spasms and often suffocates the patient, let him drink frequently a cupful of broth, gruel, or barley-water, in every pint of which a drachm and a half or two drachms of the salt of tartar or PREPARED KALI has been dissolved, which may be dulcified a little by honey or the syrup of marsh-mallows.

After bleeding and vomiting, give three to six grains of calomel mixed with as much ginger, and half a drachm of powdered sugar; let this be swallowed slowly, and worked off by drinking broth or gruel, &c. medicated by the fixed alkaline salt above mentioned. He should likewise be made to inhale the steams of warm water and vinegar. Topical bleeding, by the application of three to six leeches, according to the age or strength of the patient, applied to the throat, is of considerable service. As soon as the leeches fall off, the patient may be laid, with his head raised high in bed, between blankets, and supplied with warm barley-water, mixed with the acetated water of ammonia, to excite prespiration. When the bleeding ceases, cover the front of the neck with the compound cerate of galbanum, mentioned in the chapter on Hydrophobia. If in twelve hours the characteristic symptoms of the disease do not abate, a blistering-plaster must be applied round the neck or between the shoulders, and the child may frequently take a table-spoonful of the following mixture: milk of gum ammoniacum three ounces, hyssop or penny royal water two ounces, oxymel of squills three drachms, syrup of marsh-mallows and of white poppies of each an ounce; mix them together.

At the commencement, and throughont the whole course of the disease, the antiphlogistic regimen is necessary; and calomel, in doses of one to three grains, may be administered two or three times in the course of twenty-four hours. Cataplasms of camphor, garlic, and Venice treacle, should be applied to the feet; laxative clysters are also said to be serviceable, especially if they are mixed with a few spoonfuls of the expressed juice of garlic; and it is certain, that, as often as an increased difficulty of breathing indicates a fresh accumulation of the inspissated lymph, it should be dislodged, if possible, by emetics once or twice a-day.

Such is the treatment of the disease when it is purely inflammatory; but when it is almost entirely spasmodic, proceeding, as it were, from a cramp of the throat, asafœtida has a good effect. It may be both given in form of clyster, and taken by the mouth. Two drachms of asafœtida may be dissolved in one ounce of the acetated water of ammonia, and three ounces of hyssop or of pennyroyal water. A table-spoonful of this mixture may be given every hour, or oftener, if the patient's stomach be able to bear it. If the child cannot be brought to take this medicine, two drachms of asafœtida may be dissolved in a common clyster, and administered every six or eight hours till the violence of the disease abates.

Tincture of opium, in doses of five, six, to eight drops, given every two hours until sleep, or a remission of the stricture and spasms of the muscles of the glottis was procured, appears to have averted the fatal issue of the croup, which has lately been successfully treated by giving five drops of the tincture of fox-glove every four hours.

After the disease is subdued, the decoction of cinchona three parts,

mixed with infusion of liqorice one part, may be given to the patient, who, to prevent a relapse, must carefully avoid cool and damp, and easterly winds. Children who have been attacked with this disease, or whose constitutions seem to dispose them to it, should have their diet properly regulated. All food that is viscid or hard of digestion, and all crude, raw, trashy fruits, are to be avoided. Sometimes a Burgundy pitch plaster, worn continually between the shoulders for several years, has been thought to prevent the return of this dangerous disorder.

OF TEETHING.

Dr. Abouthnot observes, that above a tenth part of infants die in teething, by symptoms proceeding from the irritation of the tender nervous part of the jaws, occasioning inflammations, fevers, convulsions, gangrenes, &c. These symptoms are in a great measure owing to the great delicacy and exquisite sensibility of the nervous system at this time of life, which is too often increased by an effeminate education. Hence it comes to pass, that children who are delicately brought up always suffer most in teething, and often fall by convulsive disorders.

About the sixth or seventh month the teeth generally begin to make their appearance; first, the incisores, or fore-teeth; next the canini, or dog-teeth; and lastly, the molares, or grinders. About the seventh year, there comes a new set; and about the twentieth, the two inner grinders, called dentes sapientiæ, the teeth of wisdom.

Children about the time of cutting their teeth slaver much, and have generally looseness. An increased secretion of saliva is considered as a favourable symptom, and costiveness, fever, vomiting, &c. as unfavourable ones. When the teething is difficult, especially when the dog-teeth begin to make their way through the gums, the child has startings in his sleep, tumors of the gums, watchings, gripes, green stools, the thrush, fever, difficult breathing, and convulsions.

Difficult teething requires nearly the same treatment as an inflammatory disease. If the infant is wet nursed, its mother or nurse should live a little lower than usual, and occasionally take a little cooling physic. If the body be bound, it must be opened either by emollient clysters or gentle purgatives; as manna, magnesia alba, rhubarb, senna, or the like. The food should be light, and in small quantity; the drink plentiful, but weak and diluting, as infusions of blam or of the lime-tree flowers, to which about a third or fourth part of milk may be added.

If the fever be high, bleeding will be necessary; but this in very young children ought always to be sparingly performed. It is an evacuation which they bear the worst of any. Purging, vomiting, or sweating, agree much better with them, and are generally more beneficial. Harris, however, observes, that, when an inflammation appears, the physician will labour in vain if the cure be not begun with applying a leech under each ear. If the child be siezed with con-

vulsion fits, a blistering-plaster may be applied between the shoulders, or one behind each ear.

Sydenham says, that, in fevers occasioned by teething, he never found any remedy so effectual as two, three, or four drops of spirits of hartshorn in a spoonful of simple water, or other convenient vehicle, given every four hours. The number of doses may be four, five, or six. I have often prescribed this medicine with success, but always found a large dose necessary. It may be given from five drops to fifteen or twenty, according to the age of the child; and when costiveness does not forbid it, three or four drops of laudanum may be added to each dose.

In Scotland, it is very common, when children are cutting their teeth, to put a small Burgundy pitch plaster between their shoulders. This generally eases the tickling cough which attends teething, and is by no means an useless application. When the teeth are cut with difficulty, it ought to be kept on during the whole time of teething. It may be enlarged as occasion requires, and ought to be renewed at least once a fortnight.

Several things have been recommended for rubbing the gums, as oils mucilages &c.; but from these much is not to be expected. If any thing of this kind is to be used we would recommend a little fine honey, which may be rubbed on with the finger three or four times a-day. Children are generally at this time disposed to chew whatever they get into their hands. For this reason they ought never to be without somewhat that will yield a little to the pressure of their gums, as a crust of bread, a wax candle, a bit of liquorice or orris-root, or such like.

With regard to cutting the gums we have seldom known it of any great benefit. In obstinate cases, however, it ought to be tried. It may be performed by the finger nail, the edge of a sixpenny piece that is worn thin, or any sharp body that can be with safety introduced into the mouth; but the lancet, in a skilful hand, is certainly the most proper.

In order to render the teething less difficult, parents ought to take care that their children's food be light and wholesome, and that their nerves be braced by sufficient exercise without doors, the use of the cold bath, &c. The bowels ought always to be kept in a laxative state, as nothing tends to increase children's complaints of every kind, especially such as are inflammatory, so much as costivness. Were these things duly regarded, they would have a much better effect than teething necklaces, or other nonsensical amulets worn for that purpose.

OF THE RICKETS.

This disease generally attacks children between the age of six months and two years. The rickets first appeared in Britain between 1612 and 1620. We are indebted to Dr. Glisson, an English physician for the first history of this malady. That skilful anatomist and accurate observer published an account of the rickets, wherein he shewed how the viscera of such as had died of that disorder were affected. This was the more acceptable to the medical philosophers

of that day, as the rickets had then but lately appeared in England, being first discovered in Dorset and Somersetshire, about the time when luxury began to increase and manufactures to flourish; and this distemper still prevails most in towns where the inhabitants follow sedentary employments, by which means they neglect either to take pure air and proper exercise themselves, or to give it to their children. The residents in low marshy countries are also peculiarly liable to the depredations of this disease.

CAUSES.——One cause of the rickets is diseased parents. Mothers of a weak and relaxed habit, who neglect exercise, and live upon weak watery diet, can neither be expected to bring forth strong and healthy children, or to be able to nurse them. Accordingly we find that the children of such women generally die of the rickets, the scrophula, consumptions, or such like diseases. Children begotten by men in the decline of life, who are subject to the gout, the gravel, or other chronic diseases, or who have been often afflicted with the venereal disease in their youth, are likewise very liable to the rickets.

Any disorder that weakens the constitution, or relaxes the habit of children, as the small-pox, measles, teething, the hooping-cough, &c. disposes them to this disease. It may likewise be occasioned by improper diet, as food that is either too weak or watery, or so viscid that the stomach cannot digest it.

Bad nursing is the chief cause of this disease. When the nurse is either diseased, or has not enough of milk to nourish the child, it cannot thrive. But children suffer oftener by want of care in nurses than want of food. Allowing an infant to lie or set too much, or not keeping it thoroughly clean in its cloths, has the most pernicious effects.

The want of free air is likewise very hurtful to children in this respect. When a nurse lives in a close small house, where the air is damp, cold, and confined, and is too indolent to carry her child abroad into the open air, it will hardly escape this disease. A healthy child should always be in motion, unless when asleep: if it be suffered to lie, or set, instead of being tossed and dandled about, it will not thrive.

SYMPTOMS.——At the beginning of this disease the child's flesh grows soft and flabby; its strength is diminished; it loses its wonted cheerfulness; looks more grave and composed than is natural for its age, and does not choose to be moved. The head and belly become too large in proportion to the other parts; the face appears full, and the complexion florid. Afterwards the bones begin to be affected, especially in the more soft and spongy parts. Hence the wrist and ankles become thicker than usual; the spine or back-bone puts on an unnatural shape; the breast is likewise often deformed; and the bones of the arms and legs grow crooked. All these sympsoms vary according to the violence of the disease. The pulse is generally quick, but feeble; the appetite and digestion for the most part very indifferent; the teeth come slowly and with difficulty, and they often rot and fall out afterwards. Rickety children have generally great acuteness of mind, and an understanding above their years. Whether this is owing to their being more in the company of adults than other children, or to the preternatural enlargement of the brain, is not material.

REGIMEN.——As this disease is always attended with evident signs of weakness and relaxation, our chief aim in the cure must be to brace and strengthen the solids, and to promote digestion and the due preparation of the fluids. These important ends will be best answered by wholesome nourishing diet, suited to the age and strength of the patient, open dry air, and sufficient exercise. If the child has a bad nurse, who either neglects her duty, or does not understand it, she should be changed. If the season be cold, the child ought to be kept warm; and when the weather is hot, it ought to be kept cool; as sweating is apt to weaken it, and too great a degree of cold has the same effect. The limbs should be rubbed frequently with a warm hand, the flesh-brush, or with flannel impregnated with the fumes of mastich, frankincense, and myrrh, and the child kept as cheerful as possible.

The diet ought to be dry and nourishing as good bread, roasted flesh, &c. Biscuit is generally reckoned the best bread; and pigeons, pulletes, veal rabbits or mutton roasted or minced, are the most proper flesh. If the child be too young for flesh meats, he may have beef-tea, rice, arrow-soot, or pearl-barley, boiled with raisins, to which may be added a little wine and spice. His drink may be good claret, mixed with an equal quantity of water. Those whose cannot afford claret may give the child now and than a wine-glass of mild ale or good porter.

MEDICINE.——Medicines here are of little avail. The disease may often be cured by the nurse, but seldom by the physician. In children of a grose habit, gentle vomits and repeated purges of calomel or rhubarb may sometimes be of use, but they will seldom carry off the disease; that must depend chiefly upon such things as strengthen the system: for which purpose, besides the regimen mentioned above, we would recommend the cold bath, especially in the warm season. It must however be used with prudence, as some rickety children cannot bear it. The best time for using the cold bath is in the morning, and the child should be well rubbed with a dry cloth immediately after he comes out of it.

To contract the chilling effect of this process, give, as soon as he is taken out of the bath, a dose of the following medicine: Compound tincture of cinchona and tincture of columba each one ounce, wine of iron two ounces; mix them. From one to four tea-spoonfuls may be taken in a table spoonful or two of the decoction or infusion of cinchona, which, if he is not purged, may be acidulated with a little of the diluted acid of vitriol. Or give twenty to sixty drops of the ammoniated tincture of iron in the vehicle just mentioned, or in pure water; or in the following solution, which even taken alone is serviceable in this and in scrophulous cases. Take prepared natron three drachms; dissolve it in a pint of distilled water (or in river water that has boiled a few minutes and stood to cool); Dose, two or three table-spoonfuls two or three times a-day.

An infusion of cinchona (Peruvian bark, with a little orange peel, in wine or ale, would be of service, not only to quicken the moving powers after bathing, but as a remedy for this disease were it possible to prevail on children to take it.

If the child should be weakened by the cold bath, it must be discontinued and wash the surface of the body with a solutian of com-

mon potash in the proportion of half an ounce to a pint of spring water morning and evening, taking care however to wipe the skin perfectly dry with a piece of fine flannel. The back should be well rubbed every night with camphorated spirit; and if, for internal use, a powder is preferred, take prepared iron and powdered rhubarb of each five grains, white sugar ten grains; mix and give the patient this dose every morning fasting and every evening an hour before supper. The iron may be gradually increased to ten grains for a dose; but if considerable looseness prevail, persist at first only in the use of one powder every day, giving the patient, then or at any other time lime water rendered palatable by the addition of a little milk, or the decoction of hartshorn, for his ordinary drink.

Sometimes issues have been found beneficial in this disease. They are generally necessary for children who abound with gross humours.

OF CONVULSIONS.

Though more children are said to die of convulsions than of any other disease, yet they are for the most part only a symptom of some other malady. Whatever greatly irriates or stimulates the nerves may occasion convulsions; hence infants, whose nerves are easily affected, are often thrown into convulsions by any thing that irritates the alimentary canal; likewise by teething, strait cloaths, the approach of the small-pox, measles, or other eruptive diseases. Convulsions have also been fatal to thousands of infants, occasioned by confined impure air and the want of cleanliness.

When convulsions proceed from an irritation of the stomach or bowels, whatever clears them of their acrid contents, or renders these mild and inoffensive, will generally perform a cure: wherefore, if the child be costive, the best way will be to begin with a clyster, and afterwards to give a gentle vomit, which may be repeated occasionally, and the body in the mean time kept open by gentle doses of magnesia alba, or small quantities of rhubarb mixed with the powder of crabs claws.

Convulsions which proceed the eruption of the small-pox or measles generally go off upon these making their appearance. The principal danger in this case arises from the fears and apprehensions of those who have the care of the patient. Convulsions are very alarming, and something must be done to appease the affrighted parents, nurses, &c. Hence the unhappy infant often undergoes bleeding, blistering, and several other operations, to the great danger of its life, when a little time, bathing the feet in warm water, or immersing the child in a warm bath, and throwing in a mild clyster, would have set all to rights.

Belloste recommends mercury, in convulsions, to be given along with testaceous powders, which the Editor has seen attended with beneficial effects; therefore, when costiveness has preceded pain in the bowels, especially if there be an evident hardness and tension of he belly, a grain or two of calomel, with a few grains of ginger, and five to eight grains of jalap, may be given; and also a clyster

should be exhibited of thin gruel and castor oil, which may be repeated every hour till stools are obtained. But if the child has been reduced by a long continued looseness, the distention of the bowels may be attributed to confined air; and in the gruel of which the clysters are formed, caraway or aniseeds may be boiled; or the powder of those seeds may be mixed with the victuals of the infant: or take juniper-berries and caraway-seeds of each one drachm; after brusing them, add four ounces of boiling water: let them simmer over a gentle heat for ten minutes; and, when cold, strain off the liquor, and add of prepared crabs eyes or magnesia one drachm, COMPOUND TINCTURE OF CARDAMOMS half an ounce, honey sufficient to make it palatable. A pap-spoonful may be given when the child is very restless and troubled with wind. Or the belly may be fomented with a strong decoction of camomile-flowers; or let camomile-flowers, wetted with gin or other spirits made hot, be applied in a flannel bag to the belly, employing also friction with a warm hand, and gentle pressure.

When there is reason to believe that worms occasion convulsions a grain or two of calomel may be given at bed-time, and thirty drops to a drachm of the COMPOUND TINCTURE OF ALOES; or a clyster may, be injected made of a strong decoction of camomile-flowers mixed with a few grains of aloes, or two to four drachms of the tincture of asafœtida.

Children bear the operation of calomel as well as an adult: to a child of one year old, one, and not more than two, grains may be given; increasing one grain for every year to the age of five.

When convulsion fits arise from the cutting of the teeth, besides gentle evacuations, we would recommend blistering, and the use of antispasmodic medicines, as the tincture of asafœtida, galbanum, or castor. A few drops of any of these may be mixed in a cup of white wine whey, and given occasionally.

When convulsions proceed from any external cause, as the pressure occasioned by strait clothes or bandages, &c. these ought immediately to be removed: though in this case taking away the cause will not always remove the effect, yet it ought to be done. It is not likely that the patient will recover as long as the cause which first gave raise to the disorder continues to act.

When a child is seized with convulsions without having any complaint in the bowels, or symptoms of teething, or any rash or other discharge which has been suddenly dried up, we have reason to conclude that it is a primary disease, and proceeds immediately from the brain. Cases of this kind, however, happen but seldom, which is very fortunate, as little can be done to relieve the unhappy patient. When a disease proceeds from an original fault in the formation or structure of the brain itself, we cannot expect that it should yield to medicine. But as this is not always the cause, even of convulsions which proceed immediately from the brain, some attempts should be made to remove them. The chief intention to be pursued for this purpose is to make some derivation from the head, by blistering, purging, and the like. Should these fail, issues or setons may be put in the neck, or between the shoulders.

OF WATER IN THE HEAD.

Though water in the head, or a dropsy of the brain, may affect adults as well as children, yet, as the latter are more peculiarly liable to it between two and ten years of age, we thought it would be most proper to place it among the diseases of infants.

CAUSES.———A dropsy of the brain may proceed from injuries done to the brain itself by falls, blows, or the like; it may likewise proceed from an original laxity or weakness of the brain; from schirrous tumors or excrescences within the skull; a thin watery state of the blood; a diminsihed secretion of urine; a sudden check of the perspiration; and, lastly, from tedious and lingering diseases, which waste and consume the patient.

SYMPTOMS.———This disease has at first the appearance of a slow fever; the patient complains of pains in the limbs, of a pain in the crown of his head, or over his eyes; he shuns the light; is sick, and sometimes vomits; his pulse is irregular and generally low; he is not only costive, but it is with difficulty that stools are procured, which are generally of a dark greenish colour, with an oiliness, or glassy bile: though he seems heavy and dull, yet he does not sleep: he is sometimes delirious, and frequently sees objects double. Towards the end of this commonly fatal disease, the pulse becomes more frequent, the pupils are generally dilated, the checks flushed, the patient becomes comatose, and convulsions ensue.

MEDICINE.———No medicine has hitherto been found sufficient to carry off a dropsy of the brain. It is laudable, however, to make some attempts, as time or chance may bring many things to light of which at present we have no idea. The medicines generally used are, purges of rhubarb or jalap, with calomel, and blistering-plasters applied to the neck or back part of the head. To which we would beg leave to add diuretics, or medicines which promote the secretion of urine, such as are recommended in the common dropsy. A discharge from the nose ought likewise to be promoted by causing the patient to snuff the powder of asarum, white hellebore, or the like. Very sudden relief, it is said, has been sometimes obtained by bleeding; and the tincture of fox-glove, being one of the most powerful diuretic remedies with which we are acquainted, seems to be a very proper one in this disease.

Some practitioners have of late pretended to cure this disease by the use of the preparations of quicksilver. I have not been so happy as to see any instances of a cure being performed in a confirmed dropsy of the brain; but in so desperate a malady every thing that can possibly be of service to the patient deserves a trial.

CHAP. L.

OF SURGERY.

TO describe all the operations of surgery, and to point out the different diseases in which these operations are necessary, would extend this article far beyond the limits allotted to it: we must therefore confine our observations to such cases as most generally accur, and in which proper assistance is either not asked, or not always to be obtained. Though an acquaintance with the structure of the human body is indispensibly necessary to qualify a man for being an expert surgeon, yet many things may be done to save the lives of their fellow men in emergencies by those who are no adepts in anatomy. It is amazing with what facility the peasants daily perform operations upon brute animals, which are not of a less difficult nature than many of those performed on the human species; yet they seldom fail of success.

Indeed, every man is in some measure a surgeon whether he will or not. He feels an inclination to assist his fellow-men in distress, and accidents happen every hour which give occasion to exercise this feeling. The feelings of the heart, however, when not directed by the judgment, are apt to mislead. Thus one, by a rash attempt to save his friend, may sometimes destroy him; while another, for fear of doing amiss, stands still and sees his bosom friend expire without so much as attempting to relieve him, even when the means are in his power. As every good man would wish to steer a course different from either of these, it will no doubt be agreeable to him to know what ought to be done upon such emergencies.

OF BLEEDING.

No operation of surgery is so frequently necessary as bleeding; it ought therefore to bevery generally understood. But though practised by midwives, gardeners, blacksmiths, &c. we have reason to believe that very few know when it is proper. Even physicians themselves have been so much the dupes of theory in this article, as to render it the subject of ridicule. It is however an operation of great importance, and must, when reasonably and properly performed, be of singular service to those in distress.

Bleeding is proper at the beginning of all inflammatory fevers, as pleurisies peripneumonies, &c. It is likewise proper in all topical inflammations, as those of the intestines, womb, bladder, stomach, kidneys, throat, eyes, &c. as also in the asthma, sciatic pains, coughs, head-achs, rheumatisms, the apoplexy, epilepsy, and bloody-flux. After falls, blows, bruises, or any violent hurt received either externally or internally, bleeding is necessary. It is likewise necessary

for persons who have had the misfortune to be strangled, drowned, suffocated with foul air, the fumes of metal, or the like. In a word, whenever the vital motions have been suddenly stopt from any cause whatever, except in swoonings occasioned by mere weakness or hysteric affections, it is proper to open a vein. But in all disorders proceeding from a relaxation of the solids and an impovished state of the blood, as dropsies, cacochymies, &c bleeding is improper.

Bleeding for topical inflammations ought always to be performed as near the part affected as possible. When this can be done with a lancet, it is to be preferred to any other method; but where a vein cannot be found, recourse must be had to leeches or cupping.

The quantity of blood to be let must always be regulated by the strength, age, constitution, manner of life, and other circumstances relating to the patient. It would be ridiculous to suppose that a child could bear to lose as much blood as a grown person, or that a delicate lady should be bled to the same extent as a robust man.

From whatever part of the body blood is to be let, a bandage must be applied between that part and the heart. As it is often necessary, in order to raise the vein, to make the bandage pretty tight, it will be proper in such cases, as soon as the blood begins to flow, to slacken it a little. The bandage ought to be applied at least an inch or an inch and a half from the place where the wound is intended to be made.

Persons not skilled in anatomy ought never to bleed in a vein that lies over an artery or a tendon, if they can avoid it. The former may easily be known from its pulsation or beating, and the latter from its feeling hard or tight like a whipcord under the finger.

It was formerly a rule, even among those who had the character of being regular practitioners, to bleed their patients in certain diseases till they fainted. Surely a more ridiculous rule could not be proposed. One person will faint at the very sight of a lancet, while another will lose almost the whole blood of his body before he faints. Swooning depends more upon the state of the mind than of the body; besides, it may often be occasioned or prevented by the manner in which the operation is performed.

Children are generally bled with leeches. This though sometimes necessary, is a very troublesome and uncertain practice. It is impossible to know what quantity of blood is taken away by leeches; besides, the bleeding is often very difficult to stop, and the wounds are not easily healed. Would those who practise bleeding take a little more pains, and accustom themselves to bleed children, they would not find it such a difficult operation as they imagine.

Certain hurtful prejudices with regard to bleeding still prevail among the country people. They talk, for instance, of head-veins, heart-veins, breast-veins, &c. and believe that bleeding in these will certainly cure all diseases of the parts from whence they are supposed to come, without considering that all the blood vessels arise from the heart, and return to it again; for which reason, unless in topical inflammations, it signifies very little from what part of the body blood is taken. But this, though a foolish prejudice, is not near so hurtful as the vulgar notion that the first bleeding will perform wonders. This belief makes them often postpone the operation when necessary, in order to reserve it for some more important occasion,

and, when they think themselves in extreme danger, they fly to it for relief, whether it be proper or not. Bleeding at certain stated periods or seasons has likewise bad effects.

It is a common notion that bleeding in the feet draws the humours downwards, and consequently cures diseases of the head and other superior parts; but we have already observed that, in all topical affections, the blood ought to be drawn as near the part as possible. When it is necessary, however, to bleed in the foot or hand, as the veins are small, and the bleeding is apt to stop too soon, the part ought to be immersed in warm water, and kept there till a sufficient quantity of blood be let.

We shall not spend time in describing the manner of performing this operation: that will be better learned by example than precept. Twenty pages of description would not convey so just an idea of the operation as seeing it once performed by an expert hand. Neither is it necessary to point out the different parts of the body from whence blood may be taken, as the arm, foot forehead, temples, neck, &c. These will readily occur to every intelligent person, and the foregoing observations will be sufficient for determining which of them is most proper upon any particular occasion. In all cases where the intention is merely to lessen the general mass of blood, the arm is the most commodious part of the body in which the operation can be performed.

OF INFLAMMATIONS AND ABSCESSES.

From whatever cause an inflammation proceeds, it must terminate either by dispersion, suppuration, or gangrene. Though it is impossible to foretel with certainty in which of these ways any particular inflammation will terminate, yet a probable conjecture may be formed with regard to the event from a knowledge of the patient's age and constitution. Inflammations happening in a slight degree upon colds, and without any previous disposition, will most probably be dispersed; those which follow close upon a fever, or happen to persons of a gross habit of body, will generally suppurate; and those which attack very old people, or persons of a dropsical habit, will have a strong tendency to gangrene.

If the inflammation be slight, and the constitution sound, the dispersion ought always to be attempted. This will be best promoted by a slender diluting diet, plentiful bleeding, and repeated purges. The part itself must be fomented, and, if the skin be very tense, it may be embrocated with a mixture of three-fourths of sweet-oil and one-fourth of vinegar, and afterwards covered with a piece of wax-plaster.

If, notwithstanding these applications, the symptomatic fever increases, and the tumor becomes larger, with violent pain and pulsation, it will be proper to promote the suppuration. The best application for this purpose is a soft poultice, which may be renewed twice a-day. If the suppuration proceeds but slowly, a raw onion cut small or bruised may be spread upon the poultice, or apply the ripening cataplasm. When the abscess is ripe or fit for opening, which may easily be known from the thinness of the skin in the most promi-

nent part of it, fluctuation of matter which may be felt under the finger, and, generally speaking, an abatement of the pain, it may be opened either with a lancet or by means of caustic.

The last way in which an inflammation terminates is in a gangrene or mortification, the approach of which may be known by the following symptoms: the inflammation loses its redness, and becomes duskish or livid; the tension of the skin goes off, and it feels, flabby; little bladders filled with ichor of different colours spread all over it; the tumor subsides, and from a duskish complexion becomes black; a quick low pulse, with cold clammy sweats, are the immediate forerunners of death.

When these symptoms first appear, the part ought to be fomented with the decoction for fomentation, embrocated with camphorated spirit, and a poultice of oatmeal and beer grounds applied. Opium and wine given internally have been found serviceable in gangrene of the toes, especially of old people. Should the symptoms become worse, the part must be scarified, and afterwards dressed with the OINTMENT OF YELLOW RESIN softened with oil of turpentine. All the dressings must be applied warm. With regard to internal medicines, the patient must be supported with wine, generous cordials, and the Peruvian bark exhibited in as large doses as the stomach will bear it. If the mortified parts should separate, the wound will become a common ulcer, and must be treated accordingly.

This article includes the treatment of all those diseases, which, in different parts of the country, go by the names of biles, imposthumes. whitloes, &c. They are all abscesses in consequence of a previous inflammation, which, if possible, ought to be discussed; but when this cannot be done, the suppuration should be promoted, and the matter discharged by an incision, if necessary; afterwards the sore may be dressed with the ointment of yellow resin, or some other digestive ointment.

OF SCHIRROUS TUMORS.

SCHIRROUS tumors often terminate in cancer, a disease which is local in its origin; and though it may not be hereditary, it occurs more frequently in some families, and some constitutions are doubtless more liable to it than others, especially on the application of a blow or external violence to a part like the female breast, or the testes, of a glandular structure.

A common indolent tumor frequently continues for a long time stationary, but, on the occurance of any iritating cause, is liable to assume the cancerous character; it therefore becomes a most important object to accomplish the dispersion of these tumors; an object which, happily, may be in many instances attained.

The means which have been most efficient in the dispersion of such tumors are the application of leeches at short intervals, the period being varied according to circumstances. The external use of spirit of wine, champhor, and the acetated water of litharge (commonly called Goulard's extract of lead), in different proportions; by the ointment of quicksilver, of different degrees of strength, with or without camphor; and poultices in which hemlock is the principal ingre-

dient; besides which, we have usually found it requisite to put the patient on an alterative course of medicine, continued for a longer or shorter time, as the age and constitution of the patient seemed to require. By such means many tumors in the breast have been dispersed, and that dreadful source of suffering, a cancer, prevented.

Those tumors which arise in consequence of cold yield most readily to the bleeding by leeches. Those which are more indolent, and seem connected with a languid state of constitution, give way to hemlock or mercury.

The learned and ingenious Mr. Home also observes, that there is a swelling which sometimes takes place upon the margin of the mammæ, midway between the nipple and the axilla, which appears to be independent of the gland of the breast, and only an affection of a lymphatic gland in that situation, which readily becomes enlarged, and often yields to an application of folded linen wetted with sedative lotions, such as may be composed of equal proportions of spirit of wine and camphorated spirit, with one-eighth part of the acetated water of litharge.

OF WOUNDS.

No part of medicine has been more mistaken than the treatment or cure of wounds. Mankind in general believe that certain herbs, ointments, and plasters, are possessed of wonderful healing powers, and imagine that no wound can be cured without the application of them. It is however a fact, that no external application whatever contributes towards the cure of a wound, any other way than by keeping the parts soft, clean, and defending them from the external air, which may be as effectually done by dry lint as by the most pompous applications, while it is exempt from many of the bad consequences attending them.

The same observation holds with respect to internal applications. These only promote the cure of wounds as far as they tend to prevent a fever, or to remove any cause that might obstruct or impede the operations, of Nature. It is Nature alone that cures wounds. All that Art can do is to remove obsticles, and to put the parts in such a condition as is most favourable to Nature's efforts.

With this simple view we shall consider the treatment of wounds, and endeavour to point out such steps as ought to be taken to facilitate their cure.

The first thing to be done when a person has received a wound is to examine whether any foreign body be lodged in it, as wood, stone, iron, lead, glass, dirt, bits of cloth, or the like. These, if possible, ought to be extracted, and the wound cleaned before any dressings be applied. When that cannot be effected with safety, on account of the patient's weakness or loss of blood, they must be suffered to remain in the wound, and afterwards extracted when he is more able to bear it.

When a wound penetrates into any of the cavities of the body, as the breast, the bowels, &c. or where any considerable blood-vessel is cut, a skilful surgeon ought immediately to be called, otherwise the patient may lose his life. But sometimes the discharge of blood is

so great, that, if it be not stopt, the patient may die, even before a surgeon, though at no great distance, can arrive. In this case, something must be done by those who are present. If the wound be in any of the limbs, the bleeding may generally be stopt by applying a tight ligature or bandage round the member a little above the wound. The best method of doing this is to put a strong broad garter round the part, but so slack as easily to admit a small piece of stick to be put under it, which must be twisted in the same manner as a countryman does a cart rope to secure his loading, till the bleeding stops. Whenever this is the case, he must take care to twist it no longer, as straining it too much might occasion an inflammation of the parts, and endanger a gangrene.

In parts where this bandage cannot be applied, various other methods may be tried to stop the bleeding, as the application of styptics, or astringents. Dry lint, or flour, or cloaths dipped in a solution of blue vitriol in water, the styptic water, or the compound tincture of Benjamin of the dispensatories, may be applied to the wound. When these cannot be obtained, strong spirits of wine may be used. Some recommend the agaric of the oak as preferable to any of the other styptics; and indeed it deserves considerable encomiums. It is easily obtained, and ought to be kept in every family, in case of accidents. A piece of it must be laid upon the wound, and covered with a good deal of lint, above which a bandage may be applied so tight as to keep it firmly on.

Though spirits, tinctures, and hot balsams, may be used, in order to stop the bleeding when it is excessive, they are improper at other times. They do not promote but retard the cure, and often change a simple wound into an ulcer. People imagine, because hot balsams congeal the blood, and seem, as it were, to solder up the wound, that they therefore heal it; but this is only a deception. They may indeed stop the flowing blood, by searing the mouths of the vessels; but by rendering the parts callous, they obstruct the cure.

In slight wounds, which do not penetrate much deeper than the skin, the best, application is a bit of the common black sticking plaster. This keeps the sides of the wound together, and prevents the air from hurting it, which is all that is necessary. When a wound penetrates deep, it is not safe to keep its lips quite close; this keeps in the matter, and is apt to make the wound fester. In this case the best way is to fill the wound, with soft lint, commonly called caddis. It however must not be stuffed in too hard, otherwise it will do hurt. The lint may be covered with a cloth dipped in oil, or spread with the common wax plaster, and the whole must be kept on by a proper bandage.

We shall not spend time in describing the different bandages that may be proper for wounds in different parts of the body: common sense will generally suggest the most commodious method of applying a bandage; besides, descriptions of this kind are not easily understood or remembered.

The first dressing ought to continue on for at least two days; after which it may be removed, and fresh lint applied as before. If any part of the first dressing sticks so close as not to be removed with ease or safety to the patient, it may be allowed to continue, and fresh lint dipped in sweet oil laid over it. This will soften it, so as to make it come off easily at the next dressing. Afterwards the wound may

be dressed twice a-day in the same manner till it be quite healed. Those who are fond of salves or ointments, may, after the wound is become very superficial, dress it with the ointment of yellow resin; and if fungous, or what is called proud flesh should rise in the wound, it may be checked, by mixing with the ointment a little burnt alum or red precipitate of quicksilver.

When a wound is greatly inflamed, the most proper application is a poultice of bread and milk, softened with a little sweet oil or fresh butter. This must be applied instead of a plaster, and should be changed twice a-day.

If the wound be large, and there is reason to fear an inflammation, the patient should be kept on a very low diet. He must abstain from flesh, strong liquors, and every thing that is of a heating nature. If he be of a full habit, and has lost but little blood from the wound, he must be bled: and, if the symptoms be urgent, the operation may be repeated. But when the patient has been greatly weakened by the loss of blood from the wound, it will be dangerous to bleed him, even though a fever should insue. Nature should never be too far exhausted. It is always more safe to allow her to struggle with the disease in her own way, than to sink the patient's strength by excessive evacuations.

Wounded persons ought to be kept perfectly quiet and easy. Every thing that ruffles the mind or moves the passions, as love, anger, fear, excessive joy, &c. are very hurtful. They ought above all things to abstane from venery. The body should be kept gently open, either by laxative clysters or by a cool vegetable diet, as roasted apples, stewed prunes, boiled spinage, and such like.

OF BURNS AND SCALDS.

Immediately immerse or drench the part with cold water, beer, or vinegar, and continue the application with fresh cold liquor, until the part no longer suffers pain on omitting it. A linen bag filled with fragments of ice applied to parts inflamed by burns or scalds, and frequently renewed, is often efficacious. The stimulating plan of treatment is, however, pursued in these cases by many persons, who hold the part to the fire for a competent time, or rub it with salt, or with onions; or lay compresses upon it dipped in spirit of wine, brandy, or oil of turpentine. A lady, in the act of making an application of this sort in the night, set fire to her linen, and was distroyed. When the burn has penetrated so deep as to blister or break the skin, it must be dressed with some of the liniment for burns mentioned in the Appendix, or with the emollient and gently drying ointment, commonly called cerate of calamine. This may be mixed with an equal quantity of fresh olive oil, and spread upon a soft rag, and applied to the part affected. When this ointment cannot be had, an egg may be beat up with about an equal quantity of the sweetest salad oil. This will serve very well till a proper ointment can be prepared. When the burning is very deep, after the first two or three days, it should be dressed with equal parts of the ointment of yellow resin and cerate of calamine.

When the burn is violent, or has occasioned a high degree of in-

flammation, and there is reason to fear a gangrene or mortification, the same means must be used to prevent it as are recommended in other violent inflammations. The patient, in this case, must live low, and drink freely of weak diluting liquors. He must likewise be bled, and have his body kept open by cooling purges. Pain may be assuaged by the exhibition of opiates. But if the burnt parts should become livid or black, with other symptoms of mortification, it will be necessary to bathe them frequently with warm camphorated spirits of wine, tincture of myrrh, or other antiseptics, mixed with a decoction of the Peruvian bark. In this case the bark must likewise be taken internally, and the patient's diet must be more generous, with wine, &c.

As example teaches better than precept, I shall relate the treatment of the most dreadful case of this kind that has occured in my practice. A middle-aged man, of a good constitution, fell into a large vessel full of boiling water, and miserably scalded about one half of his body. As his clothes were on, the burning in some parts was very deep before they could be got off. For the first two days the scalded parts had been frequently anointed with a mixture of lime-water and oil, which is a very proper application for recent burnings. On the third day, when I first saw him, his fever was high, and his body costive, for which he was bled, and had an emollient clyster administered. Poultices of bread and milk, softened with fresh butter, were likewise applied to the affected parts, to abate the heat and inflammation. His fever still continuing high, he was bled a second time, was kept strictly on the cooling regimen, took the saline mixture with small doses of nitre, and had an emollient clyster administered once a-day. When the inflammation began to abate, the parts were dressed with a digestive composed of soap cerate and the ointment of yellow resin. Where any black spots appeared, they were slightly scarified, and touched with the tincture of myrrh; and, to prevent their spreading, the Peruvian bark was administered. By this course, the man was so well in three weeks as to be able to attend his business.

OF BRUISES.

Bruises are generally productive of worse consequences than wounds. The danger from them does not appear immediately, by which means it often happens that they are neglected. It is needless to give any definition of a disease so universally known; we shall therefore proceed to point out the method of treating it.

In slight bruises it will be sufficient to bathe the part with the COMPOUND SOAP LINIMENT, or with warm vinegar, to which a little brandy or rum may occasionally be added, and to keep cloths wet with this mixture constantly applied to it. This is more proper than rubbing it with brandy, spirits of wine, or other ardent spirits, which are commonly used in such cases.

In some parts of the country the peasants apply to a recent bruise a cataplasm of fresh cow-dung. I have often seen this cataplasm applied to violent contusions occasioned by blows, falls, bruises, and such like, and never knew it fail to have a good effect.

When a bruise is very violent, the patient ought immediately to be bled, and put upon a proper regimen. His food should be light and cool, and his drink weak, and of an opening nature; as whey sweetened with-honey, decoctions of tamarinds, barley, cream-tartar whey, and such like. The bruised part must be bathed with vinegar and water, as directed above; and a poultice made by boiling crumb of bread, elder flowers, and camomile flowers, in equal quantities of vinegar and water, applied to it. This poultice is peculiarly proper when a wound is joined to the bruise. It may be renewed two or three times a-day.

As the structure of the vessels is totally destroyed by a violent bruise, there often ensues a great loss of substance, which produces an ulcerous sore very difficult to cure. If the bone be affected, the sore will not heal before an exfoliation takes place; that is, before the diseased part of the bone separates, and comes out through the wound. This is often a very slow operation, and may even require several years to be completed. Hence it happens that these sores are frequently mistaken for the king's evil, and treated as such, though in fact they proceed solely from the injury which the solid parts received from the blow.

Patients in this situation are pestered with different advices. Every one who sees them proposes a new remedy, till the sore is so much irritated with various and opposite applications, that it is often at length rendered absolutely incurable. The best method of managing such sores is, to take care that the patient's constitution does not suffer by confinement or improper medicine, and to apply nothing to them besides simple ointment spread upon soft lint, over which a poultice of bread and milk, with boiled camomile flowers, or the like, may be put, to nourish the part, and keep it soft and warm. Nature, thus assisted, will generally in time operate a cure, by throwing off the diseased parts of the bone, after which the sore soon heals.

OF ULCERS.

Ulcers may be the consequence of wounds, bruises, or imposthumes, improperly treated; they may likewise proceed from an ill-state of the humours, or what may be called a bad habit of body.

In the latter case, they ought not to be hastily dried up, otherwise it may prove fatal to the patient. Ulcers happen most commonly in the decline of life; and persons who neglect exercise, and live grossly, are most liable to them. They might often be prevented by retrenching some part of the solid food, or by opening artificial drains, as issues, setons, or the like.

An ulcer may be distinguished from a wound by its discharging a thin watery humour, which is often so acrid as to inflame and corrode the skin; by the hardness and perpendicular situation of its sides or edges; by the time of its duration, &c.

It requires considerable skill to be able to judge whether or not an ulcer ought to be dried up. In general, all ulcers which proceed from a bad habit of body should be suffered to continue open, at least till the constitution has been so far changed by proper regimen,

or the use of medicine, that they seem disposed to heal of their own accord. Ulcers which are the effect of malignant fevers, or other acute diseases, may generally be healed with safety after the health has been restored for some time. The cure ought not however to be attempted too soon, nor at any time without the use of purging medicines and a proper regimen. When wounds or bruises have, by wrong treatment, degenerated into ulcers, if the constitution be good, they may generally be healed with safety. When ulcers either accompany chronical diseases, or come in their stead, they must be cautiously healed. If an ulcer conduces to the patient's health, from whatever cause it proceeds, it ought not to be healed; but if, on the contrary, it wastes the strength, and consumes the patient by a slow fever, it should be healed as soon as possible.

We would earnestly recommend a strict attention to these particulars to all who have the misfortune to labour under this disorder, particularly persons in the decline of life; as we have frequently known people throw away their lives by the want of it, while they were extolling and generously rewarding those whom they ought to have looked upon as their executioners.

The most proper regimen for promoting the cure of ulcers is to avoid all spices, salted and high seasoned food, all strong liquors, and to lessen the usual quantity of flesh meat. The body ought to be kept gently open by a diet consisting chiefly of cooling laxative vegetables, and by drinking butter-milk, whey sweetened with honey, or the like. The patient ought to be kept cheerful, and should take as much exercise as he can easily bear.

When the bottom and sides of an ulcer seem hard and callous, they may be sprinkled twice a-day with a little red precipitate of mercury, and afterwards dressed with the ointment of yellow resin. Sometimes it will be necessary to have the edges of the ulcer scarified with the lancet.

Lime-water his frequently been known to have very happy effects in the cure of obstinate ulcers. It may be used in the same manner as directed for the stone and gravel. It may also be employed externally as a lotion; and if there is reason to suspect that the ulcer arises from a syphititic cause, add one drachm of calomel to half a pint of lime-water, with which wash the sore twice a-day.

Dr. Whytt strongly recommeds the use of the solution of muriated quicksilver in brandy, for the cure of obstinate ill-conditioned ulcers. I have frequently found this medicine, when given according to the Doctor's directions, prove very successful. The dose is a tablespoonful night and morning; at the same time washing the sore twice or thrice a-day with it. He informed me, "That he observed washing the sore thrice a-day with the solution of a triple strength was very beneficial." In ulcers of the lower limbs great benefit is often received from tight rollers, or wearing a laced stocking; this prevents the flux of humours to the sores, and disposes them to heal.

A fistulous ulcer can seldom be cured without an operation. It must either be laid open so has to have its callous parts distroyed by some corrosive application, or they must be entirely cut away by the knife: but as this operation requires the hand of an expert surgeon, there is no occasion to discribe it. Ulcers about the ANUS are most apt to become fistulous, and are very difficult to cure. Some indeed, it is said, have found Ward's fistula paste very successful in this

complaint. But as these ulcers generally proceed from an ill habit of body, they will seldom yield to any thing except a long course of regimen, assisted by medicines which are calculated to correct that particular habit, and to induce an almost total change in the constitution.

CHAP. LI.

OF DISLOCATIONS.

WHEN a bone is moved out of its place or articulation so as to impede its proper functions, it is said to be luxated or dislocated. As this often happens to persons in situations where no medical assistance can be obtained, by which means limbs, and even lives, are frequently lost, we shall endeavour to point out the method of reducing the most common luxations, and those which require immediate assistance. Any person of common sense and resolution, who is present when a dislocation happens, may often be of more service to the patient than the most expert surgeon can after the swelling and inflammation have come on. When these are present, it is diffcult to known the state of the joint, and dangerous to attempt a reduction; and by waiting till they are gone off, the muscles become so relaxed, and the cavity filled up, that the bone can never afterwards be retained in its place.

A recent dislocation may generally be reduced by extension alone, which must always be greater or less according to the strength of the muscles which move the joint, the age, robustness, and other circumstances of the patient. When the bone has been out of its place for any considerable time, and a swelling or inflammation has come on, it will be necesary to bleed the patient, and, after fomenting the part, to apply soft poultices with vinegar to it for some time before the reduction is attempted.

All that is necessary after reduction, is to apply cloths dipt in vinegar or camphorated spirits of wine to the part, and to keep it perfectly easy; and, if any degree of inflammation remain, the application of leeches is the best remedy. Many bad consequences proceed from the neglect of this rule. A dislocation seldom happens without the tendons and ligaments of the joint being streched and sometimes torn. When these are kept easy till they recover their strength and tone, all goes on very well; but if the injury be increased by too frequent an exertion of the parts, no wonder if they be found weak and diseased ever after.

DISLOCATION OF THE JAWS.

THE lower jaw may be luxated by yawning, blows, falls, chewing hard substances, or the like. It is easily known from the patient's being unable to shut his mouth, or to eat any thing, as the teeth of

the under jaw do not correspond with those of the upper: besides, the chin either hangs down or is thrown toward one side, and the patient is neither able to speak distinctly, nor to swallow without considerable difficulty.

The usual method of reducing a dislocated jaw, is to set the patient upon a low stool, so as an assistant may hold the head firm by pressing it against his breast. The operator is then to thrust his two thumbs, being first wrapt up with linen cloths that they may not slip, as far back into the patient's mouth as he can, while his fingers are applied to the jaw externally. After he has got firm hold of the jaw, he is to press it strongly downwards and backwards, by which means the elapsed heads of the jaw may be easily pushed into their former cavities.

DISLOCATION OF THE NECK.

The neck may be dislocated by falls, violent blows, or the like. In this case, if the patient receives no assistance, he soon dies, which makes people imagine the neck was broken; it is, however, for the most part only partially dislocated, and may be reduced by almost any person who has resolution enough to attempt it. A complete dislocation of the neck is instantaneous death.

When the neck is dislocated, the patient is immediately deprived of all sense and motion; his neck swells, his countenance appears bloated; his chin lies upon his breast, and his face is generally turned towards one side.

To reduce this dislocation, the unhappy person should immediately be laid upon his back on the ground, and the operator must place himself behind him so as to be able to lay hold of his head with both hands while he makes a resistance by placing his knees against the patient's shoulders. In this posture he must pull the head with considerable force, gently twisting it at the same time, if the face be turned to one side, till he preceives that the joint is replaced, which may be known from the noise which the bones generally make when going in, the patient's beginning to breathe, and the head continuing in its natural posture.

This is one of those operations which it is more easy to perform than describe. I have known instances of its being happily performed even by women, and often by men of no medical educations After the neck is reduced, the patient ought to be bled, and should be suffered to rest for some days, till the parts recover their proper tone.

DISLOCATION OF THE RIBS.

As the articulation of the ribs with the back-bone is very strong, they are not often dislocated. It does however sometimes happen, which is a sufficient reason for our taking notice of it. When a rib is dislocated either upwards or downwards, in order to replace it the patient should be laid upon his belly on a table, and the operator must endeavour to push the head of the bone into its proper place.

Should this method not succeed, the arm of the disordered side may be suspended over a gate or ladder, and, while the ribs are thus stretched asunder, the heads of such as are out of place may be thrust into their former situation.

Those dislocations wherein the heads of the ribs are forced inwards are both more dangerous and the most difficult to reduce, as neither the hand nor any instrument can be applied internally to direct the luxated heads of the ribs. Almost the only thing that can be done, is, to lay the patient upon his belly over a cask, or some gibbous body, and to move the fore-part of the rib inward toward the back, sometimes shaking it; by this means the heads of the luxated ribs may slip into their former place.

DISLOCATION OF THE SHOULDER.

The humerus or upper bone of the arm may be dislocated in various directions; it happens however most frequently downwards, but very seldom directly upwards. From the nature of its articulation, as well as from its exposure to external injuries, this bone is the most subject to dislocation of any in the body. A dislocation of the humerus may be known by a depression or cavity on the top of the shoulder, and an inability to move the arm. When the dislocation is downward or forward, the arm is elongated, and a ball or lump is perceived under the arm-pit; but when it is backward, there appears a protuberance behind the shoulder, and the arm is thrown forwards towards the breast.

The usual method of reducing dislocations of the shoulder is to seat the patient upon a low stool, and to cause an assistant to hold his body so that it may not give way to the extension, while another lays hold of the arm a little above the elbow, and gradually extends it. The operator then puts a napkin under the patient's arm, and causes it to be tied about his own neck: by this, while a sufficient extension is made, he lifts up the head of the bone, and with his hands directs it into its proper place.

There are various machines invented for facilitating this operation, but the hand of an expert surgeon is always more safe. In young and delicate patients, I have generally found it a very easy matter to reduce the shoulder, by extending the arm with one hand, and thrusting in the head of the bone with the other. In making the extension, the arm ought always to be a little bent.

DISLOCATION OF THE ELBOW.

The bones of the fore-arm may be dislocated in any direction. When this is the case, a protuberance may be observed on that side of the arm towards which the bone is pushed, from which, and the patient's inability to bend his arm, a dislocation of this joint may be easily known.

Two assistants are generally necessary for reducing a dislocation of the elbow; one of them must lay hold of the arm above and the other

below the joint, and make a pretty strong extension, while the operator returns the bones into their proper place. Afterwards the arm must be bent, and suspended for some time with a sling about the neck.

Luxations of the wrist and fingers are to be reduced in the same manner as those of the elbow, viz. by making an extension in different directions, and thrusting the head of the bone into its place.

DISLOCATION OF THE THIGH.

When the thigh-bone is dislocated forward and downward, the knee and foot are turned out, and the leg is longer than the other; but when it is displaced backward, it is usually pushed upward at the same time, by which means the limb is shortened, and the foot is turned inwards.

When the thigh-bone is displaced forward and downward, the patient, in order to have it reduced, must be laid upon his back, and made safe by bandages, or held by assistants, while by others an extension is made by means of slings fixed about the bottom of the thigh a little above the knee. While the extension is made, the operator must push the head of the bone outward, till it gets into the socket. If the dislocation be outward, the patient must be laid upon his face, and, during the extension, the head of the bone must be pushed inward.

Dislocation of the knees, ankles, and toes, are reduced much in the same manner as those of the upper extremities, viz. by making an extension in opposite directions, while the operator replaces the bones. In many cases, however, the extension alone is sufficient, and the bone will slip into its place merely by pulling the limb with sufficient force. It is not hereby meant, that force alone is sufficient for the reduction of dislocations. Skill and address will often succeed better than force. I have known dislocation of the thigh reduced by one man, after all the force that could be used by six had proved ineffectual.

CHAP. LII.

OF BROKEN BONES, &c.

THERE is, in most country villages, some person who pretends to the art of reducing fractures. Though in general such persons are very ignorant, yet some of them are very successful; which evidently proves that a small degree of learning, with a sufficient share of common sense and a mechanical head, will enable a man to be useful in this way. We would, however, advise people never to employ such operators when an expert and skilful surgeon, can be had; but when that is impracticable,

they must be employed: we shall therefore recommended the following hints to their consideration.

When a large bone is broken, the patient's diet ought in all respects to be the same as in an inflammatory fever. He should likewise be kept quiet and cool, and his body open by emollient clysters; or, if these cannot be conveniently administered, by food that is of an opening quality; as stewed prunes, apples boiled in milk, boiled spinage, and the like. It ought however to be here remarked, that persons who have been accustomed to live high, are not all of a sudden to be reduced to a very low diet. This might have fatal effects. There is often a necessity for indulging even bad habits, in some measure, where the nature of the disease might require a different treatment.

It will generally be necessary to bleed the patient immediately after a fracture, especially if he be young, of a full habit, or has at the same time received any bruise or contusion. This operation should not only be performed soon after the accident happens, but, if the patient be very feverish, it may be repeated next day. When several of the ribs are broken, bleeding is peculiarly necessary.

If any of the large bones which support the body are broken, the patient must keep his bed for several weeks. It is by no means necessary, however, that he should lie all that time, as is customary, upon his back. This situation sinks the spirits, galls and frets the patient's skin, and renders him very uneasy. After the second week he may be gently raised up, and may sit several hours, supported by a bedchair, or the like, which will greatly relieve him. Great care, however, must be taken in raising him up and laying him down, that he make no exertions himself, otherwise the action of the muscles may pull the bone out of its place.

It is of great importance to keep the patient dry and clean while in this situation. By neglecting this, he is often so galled and excoriated, that he is forced to keep shifting places for ease. I have known a fractured thigh-bone, after it had been kept straight for above a fortnight, displaced by this means, and continue bent for life, in spite of all that could be done.

It has been customary, when a bone was broken, to keep the limb for five or six weeks continually upon the stretch. But this is a bad posture. It is both uneasy to the patient, and unfavourable to the cure. The best situation is to keep the limb a little bent. This is the posture into which every animal puts its limbs when it goes to rest, and in which fewest muscles are upon the stretch. It is easily effected, by either laying the patient upon his side, or making the bed so as to favour this position of the limb.

Bone-setters ought carefully to examine whether the bone be not shattered or broken into several pieces. In this case it will sometimes be necessary to have the limb immediately taken off, otherwise a gangrene or mortification may ensue. The horror which attends the very idea of an amputation often occasions its being delayed in such cases till too late. I have known this principle operate so strongly, that a limb, where the bones were shattered into more than twenty pieces, was not amputated before the third day after the accident, when the gangrene had proceeded so far as to render the operation useless

When a fracture is accompanied with a wound, it must be dressed in all respects as a common wound.

All that art can do towards the cure of a broken bone, is to lay it perfectly straight, and to keep it quite easy. All tight bandages do hurt. They had much better be wanting altogether. A great many of the bad consequences which succeed to fractured bones are owing to tight bandages. This is one of the ways in which the excess of art, or rather the abuse of it, does more mischief than would be occasioned by the want of it. Some of the most sudden cure of broken bones which were ever known happened where no bandages were applied at all. Some method however must be taken to keep the member steady; but this may be done many ways without bracing it with a tight bandage.

The best method of retention is by two or more splints made of leather or pasteboard. These, if moistened before they be applied, soon assume the shape of the included member, and are sufficient, by the assistance of a very slight bandage, for the purposes of retention. The bandage which we would recommend is that made with twelve or eighteen tails. It is much easier applied and taken off than rollers, and answers all the purposes of retention equally well. The splints should always be as long as the limb, with holes cut for the ankles when the fracture is in the leg.

In fractures of the ribs, where a bandage cannot be properly used, an adhesive plaster may be applied over the part. The patient in this case ought to keep himself quite easy, avoiding every thing that may occasion sneezing, laughing, coughing, or the like. He ought to keep his body in a straight posture, and should take care that his stomach be constantly distended, by taking frequently some light food, and drinking freely of weak watery liquors.

The most proper external application for a fracture is OXYCRATE, or a mixture of vinegar and water. The bandages should be wet with this at every dressing.

OF STRAINS.

STRAINS are often attended with worse consequences than broken bones. The reason is obvious; they are generally neglected. When a bone is broken, the patient is obliged to keep the member easy, because he cannot make use of it; but when a joint is, only strained, the person finding he can still make a shift to move it, is sorry to lose his time for so trifling an ailment. In this way he deceives himself, and converts into an incurable malady what might have been removed by only keeping the part easy for a few days.

Country people generally immerse a strained limb in cold water. This is very proper, provided it be done immediately, and not kept in too long. But the custom of keeping the part immersed in cold water for a long time is certainly dangerous. It relaxes instead of bracing the part, and is more likely to produce a disease than remove one.

Wrapping a garter, or some other bandage, pretty tight about the strained part, is likewise of use. It helps to restore the proper tone of the vessels, and prevents the action of the parts from increasing the

disease. If there be inflammation, fomenting and bleeding near the affected part and saline cathartics are beneficial; but we also recommend ease.

Many external applications are recommended for strains. The following are such has may be used with the greatest safety, viz. poultices made of stale beer or vinegar and oatmeal, camphorated spirits of wine, water of acetated ammonia, liniment of ammonia, compound spirit of ammonia diluted with a double quantity of water; and the common fomentation, with the addition of brandy or spirit of wine.

CHAP. LIII.

OF CASUALTIES.

IT is certain that life, when to all appearance lost, may often, by due care, be restored. Accidents frequently prove fatal, merely because proper means are not used to counteract their effects. No person ought to be looked upon as killed by any accident, unless where the structure of the heart, brain, or some organ necessary to life is evidently destroyed. The action of these organs may be so far impaired as even to be for some time imperceptible, when life is by no means gone. In this case, however, if the fluids be suffered to grow cold, it will be impossible to put them again in motion, even though the solids, should recover their power of acting. Thus, when the motion of the lungs has been stopt by unwholesome vapour, the action of the heart by a stroke on the breast, or the functions of the brain by a blow on the head, if the person be suffered to grow cold, he will in all probability continue so; but, if the body be kept warm, as soon as the injured part has recovered its power of acting, the fluids will again begin to move, and all the vital functions will be restored.

The unhappy person, instead of being carried into a warm house, and laid by the fire, or put to a warm bed, is generally hurried away to church, or a barn, or some other cold damp house, where, after a fruitless attempt has been made to bleed him perhaps by one who knew nothing of the matter, he is given over for dead, and no further notice taken of him.

When a person seems to be suddenly deprived of life, our first business is to enquire into the cause. We ought carefully to observe whether any substance be lodged in the windpipe or gullet; and, if that is the case, attempts must be made to remove it. When unwholesome air is the cause, the patient ought immediately to be removed out of it. If the circulation be suddenly stopped, from any cause whatever, except mere weakness, the patient should be bled. If the blood does not flow, he may be immersed in warm water, or rubbed with warm cloths, &c. to promote the circulation. When the cause cannot be suddenly removed, our great aim must be to keep up the vital warmth, by rubbing the pa-

tient with hot cloths, and covering his body with warm sand, ashes, or the like.

I shall now proceed to treat more fully of those accidents which, without immediate assistance, would often prove fatal, and to point out the most likely means for relieving the unhappy sufferers.

OF SUBSTANCES STOPT BETWEEN THE MOUTH AND STOMACH.

Though accidents of this kind are very common, and extremely dangerous, yet they are generally the effects of carelessness. Children should be taught to chew their food well, and to put nothing into their mouths which it would be dangerous for them to swallow. But children are not the only persons guilty of this piece of imprudence. I know many adults who puts pins, nails, and other sharp-pointed substances, in their mouths upon every occasion, and some who even sleep with the former there all night. This conduct is exceedingly injudicious, as a fit of coughing, or twenty other accidents, may force over the substance before the person is aware.

When any substance is detained in the gullet, there are two ways of removing it, viz. either by extracting it, or pushing it down. The safest and most certain way is to extract it; but this is not always the easiest; it may therefore be more eligible sometime to thrust it down, especially when the obstructing body is of such a nature, that there is no danger from its reception into the stomach. The substances which may be pushed down without danger are, all common nourishing ones, as bread, flesh, fruits, and the like. All indigestible bodies, as cork, wood, bones, pieces of metal, and such like, ought if possible to be extracted, especially if these bodies be sharp-pointed, as pins, needles, fish-bones, bits of glass, &c.

When such substances have not passed in too deep, we should endeavour to extract them with our fingers, which method often succeeds. When they are lower, we must make use of nippers, or a tract rarely succeeds, if the substance be of a flexible nature, and has descended far into the gullet.

I have often known pins and other sharp bodies, which had stuck in the throat, brought up by causing the person to swallow a bit of tough meat tied to a thread, and drawing it quickly up again. This is safer than swallowing sponge, and will often answer the purpose equally well.

When all these methods prove unsuccessful, there remains one more, which is, to make the patient vomit; but this can scarcely be of any service, unless when such obstructing bodies are simply engaged in, and not hooked or stuck into the sides of the gullet, as in this case vomiting might sometimes occasion further mischief. If the patient can swallow, vomiting may be excited by taking half a drachm or two scruples of ipecacuanha in powder made into a draught. If he is not able to swallow, an attempt may be made to excite vomiting, by tickling his throat with a feather; and, if that should not succeed a clyster of tobacco may be administered. It is made by boiling an ounce of tobacco in a sufficient quantity of water: this has often been found to succeed, when other attempts to excite vomiting had failed.

When the obstructing body is of such a nature that it may with safety be pushed downwards, this may be attempted by means of a wax-candle oiled, and a little heated, so as to make it flexible; or a piece of whalebone, wire, or flexible wood, with a sponge fastened to one end.

Should it be impossible to extract even those bodies which it is dangerous to admit into the stomach, we must then prefer the least of two evils, and rather run the hazard of pushing them down than suffer the patient to perish in a few minutes; and we ought to scruple this resolution the less, as a great many instances have happened where the swallowing of such hurtful and indigestible substances has been followed by no disorder.

Whenever it is manifest that all endeavours either to extract or push down the substance must prove ineffectual, they should be discontinued, because the inflammation occasioned by persisting in them might be as dangerous as the obstruction itself. Some have died in consequence of the inflammation, even after the body which caused the obstruction had been entirely removed.

While the means recommended above are making use of, the patient should often swallow, or, if he cannot, he should frequently receive by injection, through a crooked tube or pipe that may reach down to the gullet, some emolient liquor, as warm milk and water, barley-water, or a decoction of mallows. Injections of the kind not only soften and soothe the irritated parts, but, when thrown in with force, are often more successful in loosening the obstruction than all attempts with instruments.

When, after all our endeavours, we are obliged to leave the obstructing body in the part, the patient must be treated as if he had an inflammatory disease. He should be bled, kept upon a low diet, and have his whole neck surrounded with emollient poultices. The like treatment must also be used, if there be any reason to suspect an inflammation of the passages, though the obstructing body be removed.

A proper degree of agitation has sometimes loosened the inhering body more effectual than instruments. Thus a blow on the back has often forced up a substance which stuck in the gullet; but this is still more proper and efficacious when the substance gets into the wind-pipe. In this case vomiting and sneezing are likewise to be excited. Pins, which stuck in the gullet, have been frequently discharged by riding on horseback, or in a carriage.

When any indigestible substance has been forced down into the stomach, the patient should use a very mild and smooth diet, consisting chiefly of fruits and farinaceous substances, as puddings, pottage, and soups. He should avoid all heating and irritating things, as wine, punch, pepper, and such like; and his drink should be milk and water, barley-water, or whey.

When the gullet is so strongly and fully closed, that the patient can receive no food by the mouth, he must be nourished by clysters of soup, jelly, and the like.

OF DROWNED PERSONS.

When a person has remained above a quarter of an hour under water, there can be no considerable hopes of his recovery. But as several circumstances may happen to have continued life, in such an unfortunate situation, beyond the ordinary term, we should never too soon resign the unhappy object to his fate, but try every method for his relief.

The first thing to be done, after the body is taken out of the water is to convey it as soon as possible to some convenient place where the necessary operations for its recovery may be performed. In doing this, care must be taken not to bruise or injure the body by carrying it in any unnatural posture with the head downwards, or the like. If an adult body, it ought to be laid on a bed, or on straw, with the head a little raised, and carried on a cart or on men's shoulders, and kept in as natural and easy a position as possible. A small body may be carried in the arms.

In attempting to recover persons apparently drowned, the principal intention to be persued is, to restore the natural warmth, upon which all the vital functions depend; and to excite these functions by the application of stimulants, not only to the skin, but likewise to the lungs, intestines, &c.

Though cold was by no means the cause of the persons death, yet it will prove an effectual obstacle to his recovery. For this reason, after stripping him of his wet clothes, his body must be strongly rubbed for a considerable time with course linen cloths, as warm as they can be made; and as soon as a well heated bed can be got ready, he may be laid in it, and the rubbing should be continued. Warm cloths ought likewise to be frequently applied to the stomach and bowels, and hot bricks, or bottles of warm water, to the soles of his feet and the palms of his hands.

Strong volatile spirits should be frequently applied to the nose; and the spine of the back and pit of the stomach may be rubbed with warm brandy or spirit of wine. The temples ought also to be chafed with volatile spirits; and stimulating powders, as that of tobacco or marjoram, may be blown up the nostrils.

To renew the breathing, a strong person may blow his own breath into the patient's mouth with all the force he can, holding his nostrils at the same time. When it can be perceived by the rising of the chest or belly that the lungs are filled with air, the person ought to desist from blowing, and should press the breast and belly so as to expel the air again; and this operation may be repeated for some time alternately in flating and depressing the lungs as to imitate natural respiration.

If the lungs cannot be inflated in this manner, it may be attempted by blowing through one of the nostrils, and at the same time keeping the other close. Dr. Monro for this purpose recommends a wooden pipe fitted at one end for filling the nostril, and at the other for being blown into by a person's mouth, or for receiving the pipe of a pair of bellows, to be employed for the same purpose, if necessary.

When air cannot be forced into the chest by the mouth or nose, it may be necessary to make an opening into the wind-pipe for this purpose. It is needless however to spend time in describing this operation, as it should not be attempted unless by persons skilled in surgery.

To stimulate the intestines, the fume of tobacco may be thrown up in form of a clyster. There are various pieces of apparatus contrived for this purpose which may be used when at hand; but where these cannot be obtained, the business may be done by a common tobacco-pipe. The bowl of the pipe may be filled with tobacco well kindled, and after the small tub as been introduced into the fundament, the smoke may be forced up by blowing through a piece of paper full of holes wrapped round the mouth of the pipe, or by blowing through an empty pipe, the mouth of which is applied close to that of the other. This may also be done in the following manner: A common clyster pipe with a bag mounted upon it may be introduced into the fundament, and the mouth of the bag may be applied round the small end of a tobacco-pipe, in the bowl of which tobacco is to be kindled, and the smoke blown up as directed above. Should it be found impracticable to throw up the smoke of tobacco, clysters of warm water, with the addition of a little salt and some wine or spirits, may be frequently administered. These may be done by a common clyster-bag, and pipe; but, as it ought to be thrown well up, a pretty large syringe will answer the purpose better.

While these things are doing, some of the attendants ought to be preparing a warm bath, into which the person should be put, if the above endeavours prove ineffectual. Where there are no conveniences for using the warm bath, the body may be covered with warm sand, ashes, grains, or such like. Tissot mentions an instance of a girl who was restored to life, after she had been taken out of the water, swelled bloated, and to all appearance dead, by laying her naked body upon hot ashes, covering her with others equally hot, putting a bonnet round her head, and a stocking round her neck suffed with the same, and heaping coverings over all. After she had remained half an hour in this situation, her pulse returned, she recovered speech, and cried out, I FREEZE, I FREEZE. A little cherry brandy was given her, and she remained buried as it were under the ashes for eight hours; afterwards she was taken out, without any other complaint except that of lassitude or weariness, which went off in a few days.

Till the patient shews some signs of life, and is able to swallow, it would be useless and even dangerous to pour liquors into his mouth. His lips, however, and tongue, may be frequently wet with a feather dipt in warm brandy or other strong spirits; and, as soon as he has recovered the power of swallowing, a little warm wine, or some other cordial, ought every now and then to be administered.

Some recommend a vomit after the patient is a little re-animated; but if he can be made to puke without the sickening draught, it will be more safe: this may generally be done by tickling the throat and fauces, with an oiled feather, or some other soft substance, which will not injure the parts. Tissot in this case recommends the oxymel of squills, a table-spoonful of which, diluted with water, may be given every quarter of an hour, till the patient has taken five or six doses. Where that medicine is not at hand, a strong infusion of sage, camomile flowers or carduus

benedictus, sweetened with honey, or some warm water, with the addition of a little salt, may, he says, supply its place. The Doctor does not intend that any of these things should be given in such quantity as to occasion vomiting. He thinks emetics in this situation are not expedient.

We are by no means to discontinue our assistance as soon as the patients discover some tokens of life, since they sometimes expire after their first appearance of recovering. The warm and stimulating applications are still to be continued, and small quantities of some cordial liquor ought frequently to be administered. Lastly, though the person should be manifestly re-animated, there sometimes remains an oppression, a cough and feverishness, which effectually constitute a disease. In this case it will be necessary to bleed the patient in the arm, and to cause him to drink plentifully of barley-water, elder-flower tea, or any other soft pectoral infusions.

Such persons as have the misfortune to be deprived of the appearances of life by a fall, a blow, suffocation, or the like, must be treated nearly in the same manner as those who have been for some time under water.

OF NOXIOUS VAPOURS.

Air may be many ways rendered noxious or even destructive to animals. This may either happen from its vivifying principle being destroyed, or from subtle exhalations with which it is impregnated. Thus air that has passed through burning fuel is neither capable of supporting fire nor the life of animals. Hence the danger of sleeping in close chambers with coal fires. Some indeed suppose the danger here proceeds from the sulphureous oil contained in the coal, which is set at liberty and diffused all over the chamber; while others imagine it is owing to the air of the room being charged with phlogiston. Be this as it may, it is a situation carefully to be avoided. Indeed it is dangerous to sleep in a small apartment with a fire of any kind. I lately saw four persons who had been suffocated by sleeping in an apartment where a small fire of coal had been left burning.

The vapour which exhales from wine, cyder, beer, or other liquors, in the state of fermentation, contains something poisonous, which kills in the same manner as the vapour of coal. Hence there is always danger in going into cellars where a large quantity of these liquors is in a state of fermentation, especially if they have been close shut up for some time. There have been many instances of persons struck dead on entering such places, and of others who have with difficulty escaped.

When subterraneous caves, that have been very long shut, are opened, or when deep wells are cleaned which have not been emptied for several years, the vapours arising from them produce the same effects as those mentioned above. For this reason, no person ought to venture into a well, pit, cellar, or any place that is damp, and has been long shut up, till the air has been sufficiently purified, by burning gunpowder in it. It is easy to know, as has been observed in a former part of this work, when the air of such places is unwholesome, by letting down a lighted

candle, throwing in burning fuel, or the like. If these continue to burn, people may safely venture in; but where they are suddenly extinguished, no one ought to enter till the air has been first purified by fire.

The offensive smell of lamps and of candles, especially when their flames are extinguished, operates like other vapours, though with less violence and less suddenly.

Such as are sensible of their danger in these situations, and retreat seasonably from it, are generally relieved as soon as they get into the open air, or, if they have any remaining uneasiness, a little water and vinegar, or lemonade, drank hot, affords them relief. But when they are so far poisoned as to have lost their feeling and understanding, the following means must be used for their recovery.

The patient should be exposed to a very pure, fresh, and open air, and volatile salts, or other stimulating substances, held to his nose. He should next be bled in the arm, or, if that does not succeed, in the neck. His legs ought to be put into warm water, and well rubbed. As soon as he can swallow, some lemonade, or water and vinegar, with the addition of a little nitre, may be given him.

Nor are sharp clysters by any means to be neglected; these may be made, by adding to the common clyster, syrup of buckthorn and tincture of senna, of each two ounces; or, in their stead, half an ounce of Venice turpentine dissolved in the yolk of an egg. Should these things not be at hand, two or three large spoonfuls of common salt may be put into the clyster. The same means, if necessary, which were recommended in the former part of this chapter, may be used to restore the circulation, warmth, &c.

Mr. Tossach, surgeon at Alloa, relates the case of a man suffocated by the steam of burning coal, whom he recovered by blowing his breath into the patient's mouth, bleeding him in the arm, and causing him to be well rubbed and tossed about. And Dr. Frewen, of Sussex, mentions the case of a young man who was stupified by the smoke of sea-coal, but was recovered by being plunged into cold water, and afterwards laid in a warm bed.

EFFECTS OF EXTREME COLD.

When cold is extremely severe, and a person is exposed to it for a long time, it proves mortal, in consequence of its stopping the circulation in the extremities, and forcing too great a proportion of blood towards the brain; so that the patient dies of a kind of apoplexy, preceded by great sleepiness. The traveller, in this situation, who finds himself begin to grow drowsy, should redouble his efforts to extricate himself from the imminent danger he is exposed to. This sleep, which he might consider as some alleviation of his sufferings, would, if indulged, prove his last.

Such violent effects of cold are happily not very common in this country: it frequently happens, however, that the hands or feet of travellers are so benumbed or frozen, as to be in danger of a mortification, if proper means are not used to prevent it. The chief danger in this situation arises from the sudden application of heat. It is very common, when the hands or feet are pinched with cold, to hold them to the

fire; yet reason and observation shew that this is the most dangerous and imprudent practice.

Every peasant knows, if frozen meat, fruits, or roots of any kind, be brought near the fire, or put into warm water, they will be destroyed by rottenness, or a kind of mortification; and that the only way to recover them is to immerse them for some time in very cold water. The same observation holds with regard to animals in this condition.

When the hands or feet are greatly benumbed with cold, they ought either to be immersed in cold water, or rubbed with snow, till they recover their natural warmth and sensibility; after which the person may be removed into an apartment a little warmer, and may drink some cups of tea, or an infusion of elder-flowers sweetened with honey. Every person must have observed, when his hands were even but slightly affected with cold, that the best way to warm them was by washing them in cold water, and continuing to rub them well for some time.

When a person has been so long exposed to the cold, that all appearances of life are gone, it will be necessary to rub him all over with snow or cold water; or, what will answer better, if it can be obtained, to immerse him in a bath of the very coldest water. There is the greatest encouragement to persist in the use of these means, as we are assured that persons who had remained in the snow, or had been exposed to the freezing air during five or six successive days, and who had discovered no marks of life for several hours, have nevertheless been revived: then continued friction with warm flannel, warm cloths, and hot wines, may be serviceable.

The whitloes, kibes, chilblains, and other inflammations of the extremities, which are so common among the peasants in the cold season, are chiefly occasioned by their sudden transitions from cold to heat. After they have been exposed to an extreme degree of cold, they immediately apply their hands and feet to the fire, or, if they have occasion, plunge them into warm water, by which means, if a mortification does not happen, an inflammation seldom fails to ensue. Most of the consequences from this quarter might be easily avoided by only observing the precautions mentioned above.

CHAP. LIV.

OF FAINTING FITS, AND OTHER CASES WHICH REQUIRE IMMEDIATE ASSISTANCE.

STRONG and healthy persons, who abound with blood, are often seized with sudden fainting fits, after violent exercise, drinking freely of warm or strong liquors, exposure to great heat, intense application to study, or the like.

In such cases the patient should be made to smell to some vinegar. His temples, forehead, and wrists, ought at the same time to be bathed

with vinegar mixed with an equal quantity of warm water; and two or three spoonsful of vinegar, with four or five times as much water, may, if he can swallow, be poured into his mouth.

If the fainting proves obstinate, or degenerates into a syncope, that is, an abolition of feeling and understanding, the patient must be bled. After the bleeding, a clyster will be proper, and then he should be kept easy and quiet, only giving him every half hour a cup or two of an infusion of any mild vegetable, with the addition of a little sugar and vinegar.

When swoonings, which arise from this cause, occur frequently in the same person, he should, in order to escape them, confine himself to a light diet, consisting chiefly of bread, fruits and other vegetables. His drink ought to be water or small beer, and he should sleep but moderately, and take much exercise.

But fainting fits proceed much oftener from a defect than an excess of blood. Hence they are very ready to happen after great evacuations of any kind, obstinate watching, want of appetite, or such like. In these an almost directly opposite course that mentioned above must be pursued.

The patient should be laid in bed, with his head low, and, being covered, should have his legs, thighs, arms, and his whole body, rubbed strongly with hot flannels. Spirit of rosemary, may be held to his nose. His mouth may be wet with a little rum or brandy; and, if he can swallow, some warm wine, mixed with sugar and cinnamon, which is an excellent cordial, may be poured into his mouth. A compress of flannel dipt in hot wine or brandy must be applied to the pit of his stomach, and warm bricks, or bottles filled with hot water, laid to his feet.

As soon as the patient is recovered a little, he should take some strong soup or broth, or a little bread or biscuit soaked in hot spiced wine. To prevent the return of the fits, he ought to take often, but in small quantities, some light yet strengthening nourishment, as panado made with soup instead of water, new-laid eggs lightly poached, chocolate, arrow-root, light roast meats, jellies, and such like.

Those fainting fits which are the effect of bleeding, or of the violent operation of purges, belong to this class. Such as happen after artificial bleeding are seldom dangerous, generally terminating as soon as the patient is laid upon the bed; indeed persons subject to this kind should always be bled lying, in order to prevent it. Should the fainting however continue longer than usual, volatile spirits, as volatile liquor of hartshorn, water of ammonia, succinated spirit of ammonia (i. e. Eau de Luce), and spirit of rosemary (i. e. Hungary water), may be held to the nose, and rubbed on the temples, &c.

When fainting is the effect of too strong or acrid purges or vomits the patient must be treated in all respects as if he had taken poison. He should be made to drink plentifully of milk, warm water, and oil, barley-water, or such like; emollient clysters will likewise be proper and the patient's strength should afterwards be recruited by giving him generous cordials and anodyne medicines.

Faintings are often occasioned by indigestion. This may either proceed from the quantity or quality of the food. When the former of these is the cause, the cure will be best performed by vomiting, which may be

promoted by causing the patient to drink a weak infusion of camomile flowers, carduus benedictus, or the like. When the disorder proceeds from the nature of the food, the patient, as in the case of weakness, must be revived by strong smells, &c. after which he should be made to swallow a large quantity of light warm fluid, which may serve to drown, as it were, the offending matter, to soften its acrimony, and either to effect the discharge of it by vomiting, or force it down into the intestines.

Even disagreeable smells will sometimes occasion swoonings, especially in people of weak nerves. When this happens, the patient should be carried into the open air, have stimulating things held to his nose, and those substances which are disagreeable to him ought immediately to be removed. But we have already taken notice of swooning which arise from nervous disorders, and shall therefore say no more upon that head.

Fainting fits often happen in the progress of diseases. In the beginning of putrid diseases they generally denote an oppression at the stomach, or a mass of corrupted humours, and they cease after evacuations either by vomit or stool. When they occur at the beginning of malignant fevers, they indicate great danger. In each of these cases, vinegar used both externally and internally is the best remedy during the paroxysm, and plenty of lemon-juice and water after it. Swoonings which happen in diseases accompanied with great evacuations must be treated like those which are owing to weakness, and the evacuations ought to be restrained. When they happen towards the end of a violent fit of an intermitting fever, or at that of each exacerbation of a continual fever, the patient must be supported by small draughts of wine and water.

Delicate and hysteric women are very liable to swooning or fainting fits after delivery. These might be often prevented by generous cordials, and the admission of fresh air. When they are occasioned by excessive flooding, it ought by all means to be restrained.

From whatever cause fainting fits proceed, exposing the patient to a current of fresh air, and the application of vinegar to the wrists, the palm of the hands, and the nostrils, will generally recover her; and this mode of relief is in general to be preferred to the common practice of pouring down some spiritous tincture or volatile drops. No more persons ought to be admitted into a room where a patient lies in a swoon than are absolutely necessary for his assistance, and the windows of the apartment should always be opened, at least as far as to admit a stream of fresh air.

Persons subject to frequent swoonings or fainting fits should neglect no means to remove the cause of them, as their consequences are always injurous to the constitution. Every fainting fit leaves the person in dejection and weakness; the secretions are thereby suspended, the humours disposed to stagnation, coagulations and obstructions are formed, and, if the motion of the blood be totally intercepted, or very considerably checked, polypuses are sometimes formed in the heart or larger vessels. The only kind of swoonings not to be dreaded are those which sometimes mark the crisis in fevers: yet even these ought, as soon as possible, to be removed.

OF INTOXICATION.

The effects of intoxication are often fatal. No kind of poison kills more certainly than an over-dose of ardent spirits. Sometimes, by destroying the nervous energy, they put an end to life at once; but in general their effects are more slow, and in many respects similar to those of opium. Other kinds of intoxicating liquors may prove fatal when taken to excess, as well as ardent spirits; but they may generally be discharged by vomiting, which ought always to be excited when the stomach is overcharged with liquor.

More of those unhappy persons, who die intoxicated, lose their lives from inability to conduct themselves, than from the destructive quality of the liquor. Unable to walk, they tumble down, and lie in some awkward posture which obstructs the circulation or breathing, and often continue in this situation till they die. No drunken person should be left by himself, till his clothes have been loosened, and his body laid in such a posture as is most favourable for continuing the vital motions, discharging the contents of the stomach, &c. The best posture for discharging the contents of the stomach is to lay the person upon his belly; when asleep he may be laid on his side, with his head a little raised, and particular care must be taken that his neck be no way bent, twisted, or have any thing too tight about it.

The excessive degree of thirst occasioned by drinking strong liquors often induces people to quench it by taking what is hurtful. I have known fatal consequences even from drinking freely of milk after a debauch of wine or sour punch; the acid liquors, together with the heat of the stomach, having coagulated the milk in such a manner that could never be digested. The safest drink after a debauch is water with a toast, tea, infusions of balm, sage, barley-water, and such like. If the person wants to vomit, he may drink a weak infusion of camomile flowers, or lukewarm water and oil; but in this condition vomiting may generally be excited by only tickling the throat with the finger or a feather.

A young man had for a hire, drank ten glasses of strong brandy. He soon after fell fast asleep, and continued in that situation for several hours, till at length his uneasy manner of breathing, the coldness of the extremities, and other threatening symptoms, alarmed his friends, and made them send for me. I found him still sleeping, his countenance ghastly, and his skin covered with a cold clammy sweat. Almost the only signs of life remaining were, a deep laborious breathing, and a convulsive motion or agitation of his bowels.

I tried to rouse him, but in vain, by pinching, shaking, applying volatile spirits and other stimulating things to his nose, &c. A few ounces of blood were taken from his arm, and a mixture of vinegar and water was poured into his mouth; but, as he could not swallow, very little of this got into the stomach. None of these things having the least effect, and the danger seeming to increase, I ordered his legs to be put into warm water, and a sharp clyster to be immediately administered. This gave him a stool, and was the first thing that relieved him. It was afterwards

repeated with the same happy effect, and seemed to be the chief cause of his recovery. He then began to shew some signs of life, took drink when it was offered him, and came gradually to his senses. He continued, however, for several days weak and feverish, and complained much of a soreness in his bowels, which gradually went off, by means of a slender diet and cool mucilagious liquors.

OF SUFFOCATION AND STRANGLING.

These may sometimes proceed from an infarction of the lungs, produced by viscid clammy humours, or a spasmodic affection of the nerves of that organ. Persons who feed grossly, and abound in rich blood, are very liable to suffocating fits from the former of these causes. Such ought, as soon as they are attacked, to be bled, to receive an emollient clyster, and to take frequently a cup of diluting liquor with a little nitre in it. They should likewise receive the steams of hot vinegar into their lungs by breathing.

Nervous and asthmatic persons are most subject to spasmodic affections of the lungs. In this case the patient's legs should be immersed in warm water, and the steams of vinegar applied as above. Warm diluting liquors should likewise be drank; to a cupful of which a teaspoonful of the camphorated tincture of opium may occasionally be added. Burnt paper, feathers, or leather, may be held to the patient's nose, and fresh air should be freely admitted to him.

Infants are often suffocated by the carelessness or inattention of their nurses, and sometimes by the mother being seized with hysteric fits in the night. An infant when in bed should always be laid so, that it cannot tumble down with its head under the bed-clothes; and when in a cradle, its face ought never to be covered. A small degree of attention to these two simple rules would save the lives of many infants, and prevent others from being rendered weak and sickly all their days by the injuries done to their lungs.

The late Mr. Glover, surgeon in London, related the case of a person who was restored to life after twenty-nine minutes hanging, and continued in good health for many years after.

The principal means used to restore this man to life were, opening the temporal artery and the external jugular; rubbing the back, mouth, and neck, with a quantity of volatile spirits and oil; administering the tobacco clyster by means of lighted pipes, and strong frictions of the legs and arms. This course had been continued for about four hours, when an incision was made into the windpipe, and air blown strongly through a canula into the lungs. About twenty minutes after this, the blood at the artery began to run down the face, and a slow pulse was just perceptible at the wrist. The frictions were continued for some time longer; his pulse became more frequent, and his mouth and nose being irritated with water of ammonia, he opened his eyes. Warm cordials were then administered to him, and in two days he was so well as to be able to walk eight miles.

This case is sufficient to shew what may be done for the recovery

of those unhappy persons who strangle themselves in a fit of despair, or otherwise, with guilty daring, attempt by barbarous hands to "put off this muddy vesture" of mortality.

OF PERSONS WHO EXPIRE IN CONVULSION FITS.

CONVULSION fits often constitute the last of acute or chronic disorders. When this is the case, there can remain but small hopes of the patient's recovery after expiring in a fit. But when a person who appears to be in perfect health is suddenly seized with a convulsion fit, and seems to expire, some attempts ought always to be made to restore him to life. Infants are most liable to convulsions, and are often carried off very suddenly by one or more fits about the time of teething. There are many well authenticated accounts of infants having been restored to life after they had to all appearance expired in convulsions.

When children are dead born, or expire soon after the birth, the same means ought to be used for their recovery as if they had expired in circumstances similar to those mentioned above.

These directions may likewise be extended to adults, attention being always paid to the age and other circumstances of the patient.

The means used with so much efficacy in recovering drowned persons are, with equal success, applicable to a number of cases where the powers of life seem in reality to be only suspended, and to remain capable of renewing all their functions, on being put into motion again. It is shocking to reflect, that for want of this consideration many persons have been committed to the grave in whom the principles of life might have been revived.

The cases wherein such endeavours are most likely to be attended with success, are all those called sudden deaths from an invisible cause, as apoplexies, hysterics, faintings, and many other disorders wherein persons in a moment sink down and expire. The various casualties in which they may be tried are, suffocations, from the sulphureous damps of mines, coal-pits, &c. the unwholesome air of long unopened wells or caverns; the noxious vapours arising from fermenting liquors; the steam of burning charcoal; sulphureous mineral acids; arsenical effluvia, &c.

The various accidents of drowning, strangling, and apparent deaths, by blows, falls, hunger, cold, &c. likewise furnish opportunities of trying such endeavours. Those perhaps who to appearance are killed by lightning, or by any violent agitation of the passions, as fear, joy, surprise, and such like, might also be frequently recovered by the use of proper means, as blowing strongly into their lungs, immersing the person in warm water, &c.

The means to be used for the recovery of persons suddenly deprived of life are nearly the same in all cases; they are practicable by every one who happens to be present at the accident, and require no great expence, and less skill. The great aim is to restore the warmth and vital motions. This may in general be attempted by means of heat, frictions, bleeding, blowing air into the lungs, administering clysters and generous cordials. These must be varied according to circumstances. Common sense, and the situation of the patient, will suggest the proper manner of conducting them. Above all, we would recommend perseverance

People ought never to despair on account of discouraging circumstances, or to leave off their endeavours as long as there is the least hope of success.

We shall conclude these observations on the suspension of the vital functions, by inserting the Resuscitative Process, directed by that patriotic institution, the

ROYAL HUMANE SOCIETY.

CAUTIONS.——1, The person is never to be held up by the heels. 2, Not to be rolled on casks, or other rough usage. 3, Avoid the use of salt: in all cases of apparent death, warm flannel lightly sprinkled with spirits may be useful.

THE DROWNED——1, Convey carefully the body, with the head raised, to the nearest convenient house. 2, Strip and dry the body; clean the mouth and nostrils. 3, Young children between two persons in a warm bed. 4, An adult: Lay the body on a blanket or bed, in a warm chamber, in winter: To be exposed to the sun in summer. 5, It is to be gently rubbed with flannel sprinkled with spirits; a heated warming pan, covered, lightly moved over the back and spine. 6, To restore breathing, introduce the pipe of a pair of bellows (when no apparatus) into one nostril, the other with the mouth closed; inflate the lungs till the breast be a little raised; the mouth and nostrils must then be let free: repeat the process till life appears. 7, Tobacco smoke is to be thrown gently into the fundament with a proper instrument, or the bowl of a pipe covered, so as to defend the mouth of the assistant. 8, The breast to be fomented with hot spirits: if no signs of life appear, the warm bath: or hot bricks, &c. applied to the palms of the hand and soles of the feet. 9, Electricity early employed by a medical assistant.

INTENSE COLD.——Rub the body with snow, ice, or cold water. Restore warmth, &c. by slow degrees, and after some time, if necessary, the plans to be employed for the resuscitation of drowned persons.

SUSPENSION BY THE CORD.——1, A few ounces of blood may be taken from the jugular vein, and cupping glasses may be applied to the head and neck; leeches also to the temples. 2, The other methods of treatment, the same as recommended for the apparently drowned.

SUFFOCATION BY NOXIOUS VAPOURS OR LIGHTNING.——Cold water to be repeatedly thrown upon the face, &c. drying the body at intervals. If the body feels cold, employ gradual warmth, and the plans of the drowned.

INTOXICATION.——The body is to be laid on a bed, &c. with the head a little raised: the neckcloth, &c. removed. Obtain immediately medical assistance, as the modes of treatment must be varied according to the state of the patient. The late Dr. Hawe earnestly recommended the perusal of Dr. Trotter's "Essay on Drunkenness," which clearly points out its fatal consequences.

GENERAL OBSERVATION.——1, On signs of returning life, a teaspoonful of warm water may be given; and, if swallowing be returned, warm wine or diluted brandy. To be put into a warm bed, and if disposed to sleep, will generally awake restored to health. 2, The plans

above recommended are to be used for three or four hours. It is an absurd and vulgar opinion to suppose persons as irrecoverable because life does not soon make its appearance. 3, Electricity and bleeding never to be employed, unless by the direction of the medical assistant.

Dr. Armstrong is descriptive and illustrative on the return of life.

——————"While the vital fire
" Burns feebly, heap not the green fuel on;
" But prudently foment the wandering spark,
" With what the soonest feels its kindred touch.
" Be frugal ev'n of that: a little give
" At first; that kindled, add a little more,
" Till by deliberate nourishing, the flame
" Revived, with all its wonted vigour glows."

OF RUPTURES.

HERNIAE, or Ruptures, are not, as the term that has long been adopted would lead us to suppose, a rupture of some of the parts which form the contents of the cavity of the abdomen or belly, or of both of them: this disease is, in general, the protrusion of a soft part, which yet remains covered by the common integuments, forming a preternatural tumor in the abdomen; and they are differently named according to the places where they are situated. The situations of this protrusion are, the groin, scrotum, and labia pudenda; the upper and fore-part of the thigh; the umbilicus, or navel; and different parts between the interstices of the abdominal muscles.

Children and old people are most liable to this disease. In the former it is generally occasioned by excessive crying, coughing, vomiting, or the like. In the latter, it is commonly the effect of blows or violent exertions of the strength, as leaping, carrying great weights, &c. In both, a relaxed habit, indolence, and an oily or very moist diet, dispose the body to this disease.

A rupture sometimes proves fatal before it is discovered. Whenever sickness, vomiting, and obstinate costiveness, give reason to suspect an obstruction of the bowels, all those places where ruptures usually happen ought carefully to be examined. The protrusion of a very small part of the gut will occasion all these symptoms, and, if not returned in due time, will prove fatal.

On the first appearance of a rupture in an infant, it ought to be laid upon its back, with its head very low. While in this posture, if the gut does not return of itself, it may easily be put up by gentle pressure. After it is returned, a piece of sticking-plaster may be applied over the part, and a proper truss or bandage must be constantly worn for a considerable time. The method of making and applying these rupture-bandages for children is pretty well known. The child must, as far as possible, be kept from crying, and from all violent exertions, till the rupture is quite healed.

The most frequent species of the affection of which we are now

treating, is the bubonocele, or inguinal hernia, which may be defined a soft swelling, somewhat elastic and tense, beginning in the groin, and descending into the scrotum of men, and into the labia pudenda of women. The tumor is most commonly formed by a part of the intestinal canal, or of the omentum, commonly called the caul; or of both.

When the intestine or gut of an adult has been forced down with great violence, or happens from any cause to be inflamed, there is often great difficulty in returning it, and sometimes the attempt is impracticable without an operation, a description of which is foreign to our purpose. We shall briefly mention the method which it is generally proper to pursue.

After the patient has been bled, he must be laid upon his back, with his head very low, and his breech laid high with pillows. In this situation flannel-cloths wrung out of a decoction of mallows and camomile-flowers, or, if these are not at hand, of warm water, must be applied for a considerable time. A clyster made of this decoction, with a large spoonful of butter and an ounce or two of salt, may be afterwards thrown up. If these should not prove successful, recourse must be had to pressure. If the tumor be very hard, considerable force will be necessary; but it is not force alone which succeeds here. The operator, at the same time that he makes a pressure with the palms of his hand, must with his fingers artfully conduct the gut in by the same aperture through which it came out. The manner of doing this can be much easier conceived than described. Should these endeavours prove ineffectual, clysters of the smoke of tobacco may be tried. These have been often known to succeed where every other method failed.

There is reason to believe that, by persisting in the use of these, and such other means as the circumstances of the case may suggest, most hernias might be reduced without an operation. Cutting for the hernia is a nice and difficult matter: I would therefore advise surgeons to try every method of returning the gut before they have recourse to the knife. I have once and again succeeded by persevering in my endeavours, after eminent surgeons had declared the reduction of the gut impracticable without an operation.

An adult, after the gut has been returned, must wear a steel truss, or suitable bandage. Such bandages or supports are generally uneasy to the wearer for some time, but by custom they become quite easy. No person who has had a rupture after he has attained the years of manhood, should ever be without a proper bandage.

If the following simple method is made use of on the first perception of a protuberance or rupture in the groin, it will prevent the bad consequences that often result from inattention and neglect; but if the patient frequently lifts a great weight, or if he carry heavy burthens, in that case it will be best for him to wear a circular steel spring truss.

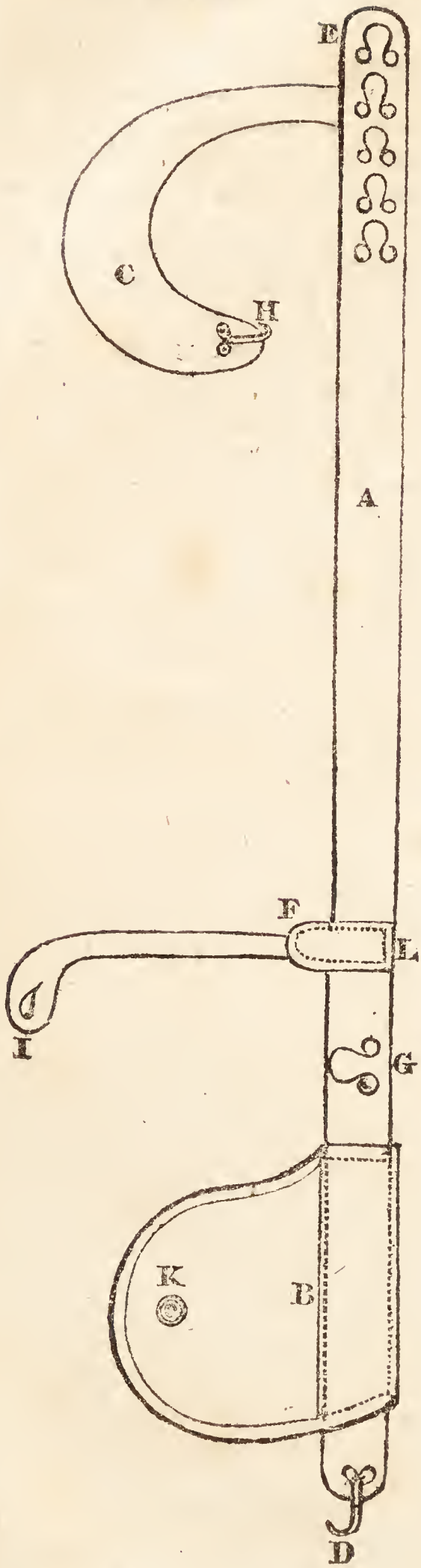
Procure a piece of strong broad tape (such as is now used in making the braces or supporters of gentlemen's small-clothes), about two feet nine inches in length; and at one end fix a large iron hook, and at the other end sew five or six iron eyes (such as were formerly used universally by women for their petticoats): let these eyes be placed about half an inch distant from each other, as represented in the Figure (see No. 1.), so that the tape or belt may be made tight around the body or lower

part of the belly. Procure also a piece of strong shoe-sole leather of the size and shape of the Figure (see No. 2.), which leather must be covered and padded with chamois or doe-skin leather, in the manner that the heads of steel spring trusses are covered. At the button or lower part of the padded leather, fix a horn, or other small button, in the place marked in the drawing. This padded head is then to be sewed by its top part to the tape belt, as is marked by the dotted lines in Figure No. 1.

Make also a back strap of soft and genteel or slight calf-skin, that will not be liable to stretch by the moisture of the body; let this be about half an inch broad, and seventeen inches long; it may be a little broader at the ends: at one end it must have an eyelet-hole to hitch on the horn button annexed to the padded head. This strap is to be fixed about ten inches from the end of the belt, and of such a length as to pass from behind, under the hip, or upper part of the thigh, and to hitch on the horn button, so as to draw and keep the padded head close and tight to the afflicted part of the body. By this means the gut will be kept in its place; and whether the patient be of a lax or weakly habit of body or not, we recommend him to wear a suspensory bag to support the testes. The use of a suspensory prevents the distention of the spermatic chord, and likewise those disagreeable dragging pains of the back, of which weakly persons often complain.

These hints, we presume, will be useful to persons who possess a mechanical inventive mind, and can assist themselves in altering and amending their bandage as circumstances may require.

FIG. I.



A, The strong tape belt.

B, The strong shoe-sole leather head.

C, A suspensory-bag.

D, The large hook to fasten to the eyes.

E, The eyes to receive the hood D.

F, The back strap, the end of which must go over the belt, and be sewed to it.

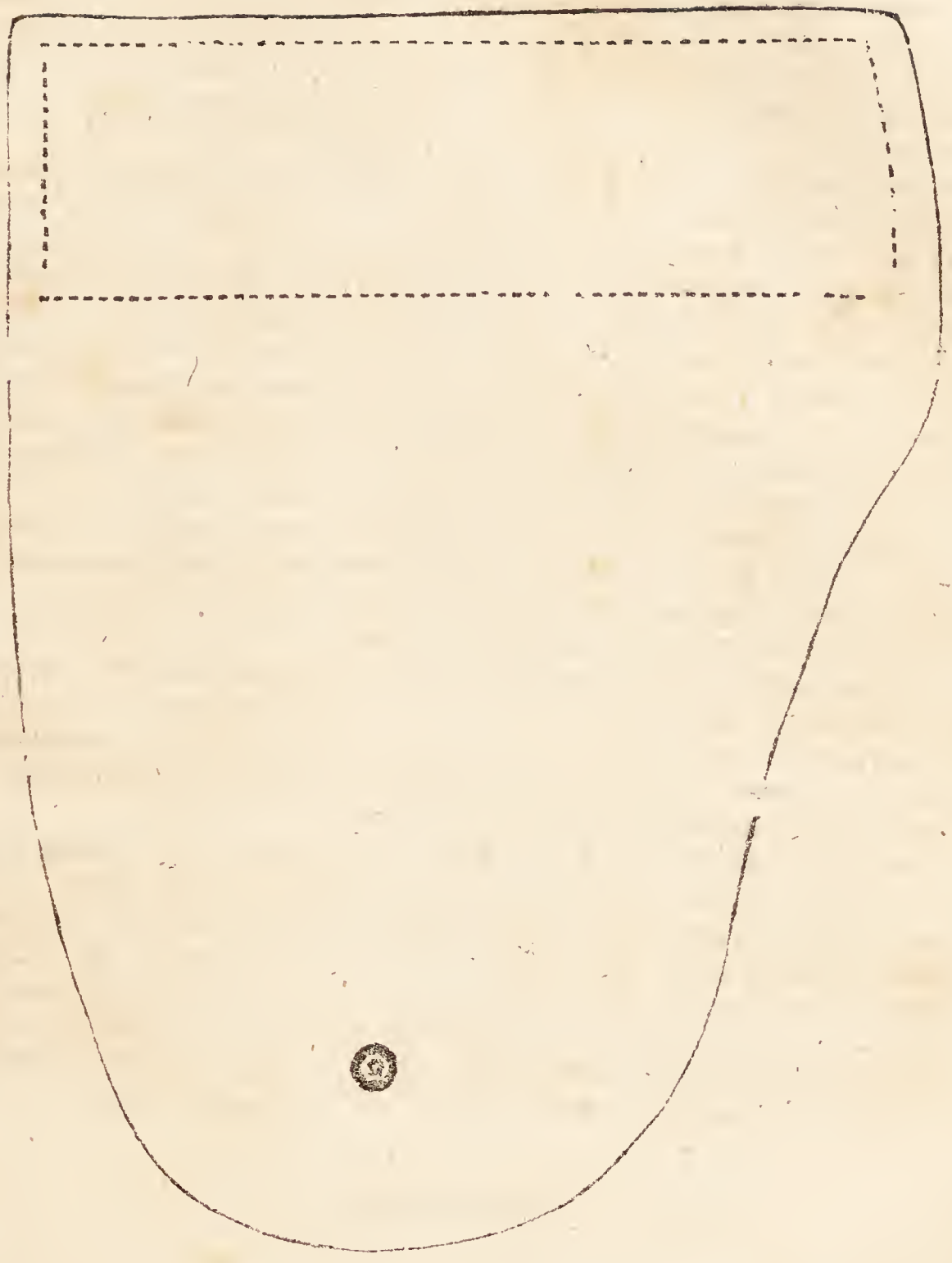
G, An iron eye to receive the hook H, at the end of the suspensory bag.

The eyelet-hole I, at the end of the back strap, to hitch on the horn button K upon the leather head.

NOTE. You must find the proper length of the back strap before you sew or fasten the end at F to the belt, which may soon be done by fastening the belt around the body in its proper place; then hitch the eyelet-hole marked I on the horn button K, and pass the strap under the thigh and up the fold of the hip, and so over the belt to L; and then draw the strap to a proper tightness, and there fasten it.

This apparatus may be made for 2s. 6d, and will answer the purpose of a useful bandage, where a double Hernia has taken place.

FIG. 2.



The shape and size of a strong leather head to be padded and then sewed to a strong tape belt, which must have a back strap fixed about 10 inches from the end of the belt, and so passing in the folds of the hip, and with a eyelet-hole at the end to hitch over the horn button, as represented by the circles in the Figure.

Let this leather be pretty well beaten upon a shoe maker's lap-stone before you cut it into a proper shape.

The following is a cheap and easy method to make an iron spring truss for the poor. Take a piece of the hoop of a rum puncheon, or slender hoop-iron, that is naturally of a stiff and hard texture or quality; let it be about eighteen or twenty inches long; harden it well by hammering it cold upon a smith's anvil, so as to acquire an elastic spring; then dress or file it smooth of an equal breadth and thickness. To one end of this spring, rivet of a proper shape and size a thin plate of iron to form the head, or cushion part; and fix two or three studs, at proper distances, to hitch the end of the belt on, so as to fasten it tight round the body: then form or bend the spring to the shape to go around the hip-bone (as it is called) of the body, then reduce the circumference or circle part to a smaller size or compass, so that it may sit closer, or press with a moderate force on the parts; and let the bottom of the head (the head or cushion of trusses is generally made too small in circumference to render all the service the patient may derive from those that are formed of larger dimensions) or cushion bend a little inwards; cover it then with leather; pad and stuff it as trusses are usually done, and fix a proper belt part to the end of the spring; also add a back strap, of a proper length, to draw the cushion part tight at the bottom, and then fix it to the spring in its proper place behind. These directions, if well executed, will answer every purpose that is necessarily required in such cases.

A truss made of stiff hammered hoop iron is recommended, because it will not be so subject to break as steel springs frequently do; and also if it becomes too slack, or does not press upon the parts sufficiently strong, the wearer may easily bend it so as to close on the parts that it is necessary to sustain, without any danger of its breaking.

Persons who have a rupture ought carefully to avoid all violent exercise, carrying great weights, leaping, running, and the like. They should likewise avoid windy aliment and strong liquors; carefully guard against catching cold, and great attention ought constantly to be paid to the state of the intestines, which, as costiveness always aggravates the disease, should be kept in a soluble state by the oil of almonds, caster oil, or the electuary of senna; or by magnesia, manna, stewed prunes, or such mild eccoprotics as the state of the body may require.

OF COLD AND WARM BATHING.

NEXT to bodily exercise and the enjoyment of the open air, nothing, perhaps, is more conducive to health than cleanliness, which is not only a moral virtue, but has an extensive influence on the preservation of health and the cure of diseases.

The necessity of immersion in cold water for the purpose of cleanliness, and the pleasurable feelings arising from its application to the body in hot countries, lead us to suppose the practice must have been coeval with man himself. We learn from the sacred Scriptures that its adoption under the form of ablution was enjoined on the Jewish

people, as an indispensable duty. The Greeks, according to their own historians, learnt their practice of bathing from the Egyptians, and the Romans from the Greeks. With those celebrated nations, public and private baths formed an important branch of useful and ornamental architecture: many opulent individuals courted the favour of the people, by lavishing their treasures in the establishment and decoration of public baths; and to this day we frequently hear that discoveries are made of the valuable remains of these national edifices, raised for the purposes of elegant and healthful recreation. Yet although, in the most remote times, cold bathing was restored to with obvious advantage by nervous and debilitated persons, yet cold baths were long banished from the practice of medicine by the usurpations of a monkish philosophy; for during the dark, or middle ages, this genuine source of health, this important medicinal remedy, presented by the hand, and as it were supplied by the very bosom of Nature, was totally neglected: until, a little more than a century ago, the good sense of Europeans, instigated by the late Sir John Floyer, Dr. Baynard, and others, brought cold bathing again into general notice.

Since an indiscriminate and promiscuous use of active and important medicines is more likely to do harm than good, it is our duty to warn people who imagine that the simple element of water can do no hurt, and that they may plunge into it at any time, that cold bathing must not be attempted by persons in a state of plethora, or full habit of body; nor by those who are subject to hæmorrhages, or fluxes of the blood, whether external or internal; nor by patients labouring under morbid affections of the breast and lungs, such as difficult respiration, short and dry coughs, &c. It is also dangerous for persons to use cold bathing who are troubled with obstructions of the intestines, or habitual costiveness, until they are prepared by suitable evacuations. Persons labouring under scorbutic and an acrimonious state of the fluids; under cutaneous diseases; in gouty and rheumatic paroxysms; in a state of pregnancy; and those who have a deformed or distorted state of the body; all these are to shun cold or sea bathing, except in some particular cases to be determined by a physician.

Cold water, from its gravity as well as its tonic power, tends both to obviate and remove the debility incident to the inhabitants of populous cities, who breathe an impure atmosphere, give way to luxurious indulgencies, or lead sedentary lives. By accelerating the motion of the blood, and promoting the different secretions, it braces and gives permanent vigour to the system. These important purposes are conceived to be most effectually answered by the application of sea-water, not only on account of its greater specific gravity, but also because it is a more powerful stimulant, promoting the cutaneous discharge, and rendering the patient less liable to catarrhal affections, or what is usually termed "CATCHING COLD."

In chlorosis; an aptitude to abortion; profuse menstrual and other weakening uterine discharges; ophthalmia, or chronic inflammation of the eyes; atrophy, convulsions and rickets of children; in preventing the recurrence of the paroxysms of intermittent fevers; in removing the debility occasioned by febrile diseases, and the long continued use of the preparations of quicksilver; in a great number of those chronic af-

fections termed nervous complaints; in epilepsy, St. Vitus's dance, and phrensy; cold or salt-water bathing may often conduce to the cure, especially when its salutary effects are assisted by the moderate use of wine, or such other medicines as are suitable to the age, sex, temperament and ailments of the patient. Scrophulous affections, and the enlargement of the bones, or tendons, commonly called white swellings of the joints, are relieved by sea-bathing, by taking sea-water internally, and by the partial application either of pumping; or the use of the vapour bath; or by wrapping the part affected in linen cloths moistened in sea-water, wetting them as often as they dry. Exposing the surface of the sore (if any) to the action of the air, as seldom as may be consistent with a due regard to cleanliness, acts powerfully as a discutient, and assists the healing process; while much benefit may be obtained by pumping salt-water on the part enlarged two or three times every day.

Persons who cannot resort to the sea, may make an artificial salt water bath, by dissolving a pound of salt in every gallon of water required.

The internal use of sea-water is not useful in some cutaneous and scrophulous complaints, but it removes worms from the intestines of children, and prevents their reproduction; it is also useful in gravel, jaundice, fistula in ano, and a good purgative in paralytic complaints. To persons labouring under pulmonary consumption, hectic fever, and hæmoptoe or spitting of blood, the air and water of the sea are injurious.

It is improper to plunge into cold water while the stomach is loaded with food, and it may not always be proper to bathe immediately after rising from bed in the morning. Persons who are much enfeebled ought not to bathe till towards noon, or at least till the digestion of their first meal may be supposed to be nearly completed. The bathing dress may be made of porous flannel, open before like a wrapper with short sleeves, that the water may come in contact with every part of the body as much and as speedily as possible: take one plunge or dip, and dress as expeditiously as may be. Should chilliness ensue on coming out of the water, a little of the compound spirit of lavender, a tea-spoonful or two of the compound tincture of cinchona, a peppermint lozenge or two, a toast dipped in warm spiced wine, or ginger tea, with moderate exercise if they can bear it, may restore the body to its due degree of warmth. Should these prove sufficient, the individual out to be put into a warm bed; and bladders of hot water, applied to the pit of the stomach and the extremities, will restore the excitability of the system. As a preparatory measure for the future use of the cold bath, which should not be used oftener than every other morning, let him use the tepid or warm bath a few times; but if, after these precautions, a pleasing sensation of glowing warmth is not perceived to diffuse itself over the surface of the body, it is a proof that cold bathing ought not to be persisted in, and that the aid of a physician of skill and integrity is necessary for the safety of the patient.

The best place for cold bathing is in a clear river, or in the invigorating water of the sea, which we think preferable, as the heat is more uniform: where neither of these can be conveniently resorted to, we recommend the shower-bath, an apparatus of which may be procured from the tin-man. This is a modern invention, in which the water falls through

numerous apertures on the body. Its effects are, doubtless, more powerful than those of the common bath; and though the latter covers the surface of the body more uniformly, yet this circumstance by no means detracts from the excellence of the former; because those intermediate parts which the water has not touched receive an electric and sympathetic impression in a degree similar to those brought into actual contract. As every drop of water from the shower-bath operates as a partial cold bath, its vivifying shock to robust individuals is more extensive and beneficial than any other method of bathing.

The external use of cold water is of singular use, as we have already noticed in the treatment of Scarlet Fever; it is also beneficial when applied to particular parts of the body, where its use may be continued much longer than the cold bath without danger.

Of all the parts of the body, the head receives the most benefit from the affusion of cold water: its application to the head was recommended and justly extolled by Celsus, eighteen centuries ago: and daily experience proves that cold water is a simple and effectual remedy for the painful affections of the head which arise from intoxication, and against too great an impetus of blood towards the haed, where persons are menaced by an apoplexy, or sudden death, by the rupture of a blood vessel of the brain.

WARM BATHING. People who return to Britain from hot climates frequently hope to repair the injury done to their relaxed constitutions by the use of the cold bath. It is proper that they should first have recourse to a bath of the temperature of 90° or 93°; this ought to be used for some time. Its warmth may be gradually diminished; he may tnen resort to the cold bath with safety and advantage. The heat of a warm oath should never exceed that of the body, or ninty six degrees. By the moderate application of the stimulant power of the warm bath, vigour and activity are communicated to the system, and an equability of temperature is acquired by those who occasionally use it: even where heat and fever have been present, it reduces the pulse to its due equilibrium.

In fine, warm bathing promotes personal cleanliness; is excellent for children afflicted with convulsions; and retards the progress of old age. It is proper for patients attacked by tetanus, or locked jaw; it abates the violence of spasmodic coughs; is useful in cutaneous diseases; it restores suppressed perspiration; relieves gouty, rheumatic, nephritic, ane hectic complaints; removes the œdematous swellings of the legs, and obstructions peculiar to females; and it obviates, in the most agreeable manner; the aching pain that is occasioned by excessive fatigue.

Persons of a full habit, however, and those who labour under inflammatory affections of the lungs, should have recourse to warm bathing with a due degree of caution. The application of its temperature should be gradual, and it ought not to be very often employed till habit and custom have reconciled the system to its full effect.

Valetudinarians, and others, who are desirous of further information on "Sea-bathing and the Use of the Warm Bath," we refer to the perusal of the ingenious "Practical Observations," by A. P. BUCHAN, M.D.

MINERAL WATERS.

IT is a circumstance of importance towards success in the cure of many disorders, to be acquainted with the qualities of the water which is generally used by the patients. The change of air has often received the credit of a cure, which was the sole effect of a change of water. This observation is more particularly worthy the notice of mineral waters; the antiquity of their use we learn from Galen, Pliny, and others, who speak largely of their virtues. The illustrious Hoffman, and many authors, extol them; whilst others observe that a pure water, on account of its simplicity, such as from Malvern springs, is to be preferred, both for drinking and for bathing; and that, in want of these, they may be as well supplied by distilled rain, or any other water that is soft and pure. Objectors say that the medicinal qualities in these waters only quicken their operation as water; but contribute nothing further, and the solutions of the like materials are of equal efficacy: to which has been replied, that the mineral contents are often volatile, and of parts more subtile than those which are the product of art; and that, when the powers of nature are expiring, experience proves their efficacy as a last resource.

The effects of mineral water are, in general, according to the qualities of their contents; these known, their use is easily determined. Their chief contents are, 1. Acids; but none pure except fixed air. 2. Alkalies; but none pure, except the fossil. 3. Neutral salts; of these none but the common and Glauber's salt. 4. Inflammable fossil oil. 5, Sulphur; only in the state of hepar. 6. Metals; none but iron and copper. 7. Earths; of these there are the calcareous, those of alum and magnesia; and these only as united with fixed air, the vitriolic acids and the marine acid. Their brisk sparkling property is owing to the quantity of fixed air which they possess; and, indeed, to this is owing their chief use as a medicine. To increase this property when defective, or to communicate it where it is totally wanting, we must refer the reader to the directions given for impregnating water with fixed air, communicated to the public by that illustrious benefactor to science, the late Dr. Joseph Priestly.

The chief medicinal waters in foreign countries, which our limits will allow us to notice, are those of AIX-LA-CHAPELLE in Germany. The hot sulphureous waters and baths of this place have been long celebrated: they arise from several springs, from whence eight baths are supplied in so many different parts of the town. At the springs these waters are perfectly transparent, and have a strong smell of sulphur, resembling the explosion of gunpowder; but this smell goes off on their being exposed to the air: they are salt and bitter to the taste, and do not appear to be chalybeate. The heat of all these waters is upwards of 100 degrees of Fahrenheit's thermometer, and some very considerably more

When they are first used, they are disagreeably harsh to the palate; but after the taste is familiarized to them, they become pleasing. When they are first taken internally, they frequently affect the head with giddiness, which also wears off by degrees. They are aperient, diuretic, and sudorific, and recommended in diseases that proceed from indigestion, in rheumatisms, in scorbutic and scrophulous cases, and in disorders of the skin; they are also directed in hysteric and hypochondriac disorders; in the gravel and stone; in the palsy; in those numerous ills which attend the injudicious use of mercury, and in a vast variety of other cases They are, however, to be avoided in hectic cases accompanied with fever, in all putrid disorders, and in every instance where the blood appears to be dissolved, or the constitution much broken down.

The mineral water of CLEVES, in Germany, is a lively, sparkling chalybeate; acts chiefly by urine, and resembles the Pyrmont water.

OF THE WATERS OF PYRMONT IN GERMANY. These wells are in the country of Pyrmont: this is very strongly chalybeate, transparent as crystal, and sparkles like champagne when it is first taken from the fountain. It is pungent, sharp, refreshing, and pleasant to the palate; but the smell is somewhat sulphureous, and a subtile vapour of the same kind arises from the wells, and affects those who serve as well as those who drink the water with giddiness like intoxication, which may be attributed to the great quantity of fixed air with which this water is impregnated. It generally acts as a purgative if taken in large quantities; taken in smaller doses, its ordinary operation is diuretic and sudorific, though in some constitutions it is said to raise a spitting, discharging the foul humours by the salival glands. The waters are recommended in chlorosis, heart-burn, and against female obstructions; they are even said to relieve barrenness; in scorbutic diseases and those of the skin; in relaxed and broken constitutions, mixed with milk: and it is also prescribed in apoplexies, epilepsies, and other disorders of the head, and in those of the breast and lungs, in which latter case it is advised to be taken lukewarm; in nervous, hysteric, hypochondriac, and paralytic complaints; in the gravel and urinary obstructions of the more minute vessels. It is said to correct the texture of the blood when it is in a lax state; and to exhilarate the spirits, without producing the disagreeable inflammatory effects which follow the use of a sufficient quantity of wine to answer this purpose.

Little preparation is necessary to the drinking these waters: if, however, the stomach and bowels appear to be so loaded that their operation is retarded, gentle laxatives may be proper; especially if the Pyrmont water occasion a retention of urine, or produce drowsiness, giddiness, restless nights, cramps, or other disagreeable symptoms of the like kind. If a purge or two should prove ineffectual to remove the complaints just mentioned, it will not be prudent to persevere in the use of these waters.

Of the Waters of Seltzer, in Germany. This spring rises near the town of Neider, or Lower Seltzer, about three leagues from Frankfort on the Maine, in an open, pleasant, and fertile country. The water bursts from the earth with great violence, is perfectly bright and colourless, and throws up a considerable number of air-bubbles when it is poured from one vessel to another. The taste of Seltzer water is an agreeable acid; but it leaves an acrid one on the tongue after it is swallowed. Exposed

to the air for any considerable time, it assumes the taste of a vapid alkaline ley, but drops no sediment, and is fœtid and highly offensive to the smell.

It effervesces with acids, and especially with Rhenish wine, or sugar, whilst it is fresh; but cēases to produce that effect after it has stood some time. It is impregnated with an alkaline salt, a portion of sea-salt, and a quantity of fixed air. It does not purge, but operates chiefly by urine in correcting acidities in the stomach, and relieving the heart-burn; it promotes the circulation of the blood by rendering the juices more fluid, and is therefore prescribed in glandular obstructions, and to carry off gross and viscid humours. In the gravel and stone, and other disorders of the kidneys and bladder, it is said to be peculiarly efficacious; and to have been administered with success, mixed with milk, in gouty and rheumatic complaints; and alone in the scurvy, eruptions on the skin, and in what is called the king's evil, as well as in those disorders that are supposed to be occasioned by a dissolved or broken state of the blood.

As a diuretic, it is given in dropsies; and, with equal quantities of asses' milk, in consumptive cases, and other disorders of the organs of respiration. In nervous disorders it may be given either with or without milk, as may be most suitable to the constitution, as well as in hypochondriac and hysteric disorders, and in female obstructions; in the latter case, exercise is necessary.

Dysenteric and other violent discharges, occasioned by acidities in the bowels, are also checked by this water: it corrects the milk of nurses, renders it more wholesome and nourishing, and prevents it from turning sour on the infants' stomachs.

If the water disagrees with the stomach, a small portion of some generous wine, or a still smaller of some good rum, may be added to it, in cases where these mixtures will not be prejudicial.

Of the Waters of Spa, in Germany. The town of Spa is situated in the district of Liege, six leagues east of that capital. In this town and in the neighbourhood are several springs of excellent chalybeate waters, which have been imported in greater quantities into Great Britain than of any other foreign mineral waters. If Spa-water is well corked, it bear scarriage and keeping better than any mineral water; but it should not be left exposed to the air, as the fixed air it contains in more abundance than any other waters of the like kind will soon evaporate: it is this abundance of fixed air which gives this water its briskness and agreeable vinous taste; and it is from the same cause that it boils from a very inconsiderable heat, and dissolves additional iron immersed in it. Acids mingled with Spa-water disengage the fixed air, and occasion effervescence; but, hot or cold, it mixes with milk without curdling.

The operation of the Spa-waters is most commonly by urine, though they sometimes act as purgatives, and in that case produce the effect of changing the colour of the stools in the same manner as other chalybeate waters; and, like them, have also a surprising effect on the spirits, procuring a constant and equal flow: they act principally on the fibres, which they brace and strengthen; and they are also cooling, refreshing, and invigorating.

The are recommended in an infinite variety of chronic disorders,

and particularly in all cases where the stomach and fibres being relaxed, or the constitution being broken down by excesses or diseases, a general weakness, languor, dejection, or tendency to wasting, has been the consequence.

These waters have also proved highly serviceable in all kinds of nervous disorders, especially where they affect gross and phlegmatic habits; in such obstinate coughs and asthmatic complaints as are occasioned by relaxation of the pulmonary vessels; in hysteric and hypochondriac complaints; in obstructions of the intestines, such as the liver, spleen, or other viscera; in all cases where the blood is in a dissolved or putrescent state from irregular lining, from scorbutic eruptions imprudently repelled, or from disorders of a putrid tendency.

They are prescribed in all cases where the fibres are either too much relaxed, and inclining to introduce a general debility, or so irritable as to threaten inflammation; in palsies and epilepsies; in all fluxes and preternatural discharges, and particularly the fluor albus, or whites and gleets in both sexes; in the gravel, stone, obstruction of urine, and such other cases as require stimulating and active medicines, and they are said to assist in relieving barrenness.

But the use of Spa-waters is forbidden without proper previous evacuations; in all cases of flushing of the face, or strong determination of blood to the head; or of feverish heat; and in hot and sanguine constitutions, and such as are affected with a redundancy of bile; in all ulcerations of the intestinal parts, and in particular of the lungs, or wherever the matter cannot be discharged; and in all such obstructions as are accompanied with any considerable degree of fever: but if the febrile symptoms are very slight, the Spa-waters, used cautiously and moderately, may prove beneficial. They quench thirst more than common water; and they have been frequently known to afford relief in ulcerated sore throats.

As the quantity must in all cases depend on circumstances, all directions on this subject are useless; but the patient himself will be the best judge; and the more he can get down without feeling the inconveniences of sickness, or weight at the stomach, the better chance he will have of speedy relief.

It is advisable to begin with a small dose, as a wine-glass or two, twice or thrice in the forenoon, and to augment it by degrees to as much as will pass off with ease, without producing any of the disagreeable symptoms already mentioned. When this point is attained, the course should be persisted in till relief is obtained, or the hope of deriving benefit from it is vanished: and in the former case the water should be discontinued in the same gradual way. In whatever quantities the patient's stomach will admit the water to be taken, moderate exercise should accompany the course; and if it should, in the first instance, prove cold to the stomach, it may be warmed, by placing the glass a minute or two in hot water; or by adding as much hot common water as will take off the chilliness of the Spa-water; or a few warm or aromatic seeds may be taken after it, till the stomach is reconciled to the use of it.

During the course, a cooling regimen is recommended; all excesses, whether in eating, drinking, exercise, or indulgence of the passions, is

to be avoided: the food should be plain, and the animal flesh such as is easy of digestion. Whenever the human body is disordered, and whatever be the disease, abstemiousness, in a certain degree, will generally contribute to its restoration.

As a preparation for the active properties and stimulant powers of the Spa-waters, gentle purgatives are prescribed; and if a plethora attend, we recommend bleeding to the degree that may be required by the constitution of the patient and the season of the year. If the stomach appears loaded with the phlegm, a small dose or two of ipecacuanha may be useful as an emetic. If the water should produce costiveness, the body should be kept open by small doses of vitriolated magnesia or rhubarb taken now and then in the first morning draught of it.

Where these waters are directed to be used in cases of too great rigidity of the solids, warm bathing is recommended as a previous measure; and the springs of Aix-la-Chapelle, being in the neighbourhood of Spa, are resorted to by those who drink the waters upon the spot. When the complaint, on the contrary, is apprehended to proceed from too great a laxity of the fibres, the cold bath is advised.

The waters of the springs at Spa are also applied externally in many different cases; they have been used with success as an injection in female weakness, such disorders as produce ulcers in the womb, and even in recent venereal diseases; as a lotion for old and offensive ulcers, and as a gargle for venereal eruptions in the mouth; for relaxations in the tonsils of the throat, and to fasten loose teeth. Taken internally, and used as a bath at the same time, they are said to cure the itch and other eruptions on the skin.

There are five principal springs at Spa. 1. The Pohoun, or Pouxon 2. The Geromsterre. 3. Sauvenierre.. 4. Wartroz. 5. Tonnelet. In the application of these waters, regard should be had to the different degrees of strength, as they have been already described; and they may by this means be suited to the various diseases for which they are prescribed. Some little variation of the qualities of these waters will point out which of them are to be preferred in one case, and which in another.

The powerful efforts of the human mind have, during the last fifty years, been productive of many chemical discoveries and improvements extensively useful to the arts, and equally important to the preservation of health and the relief of disease. Messrs. Nicholas Paul and Co. of London now so happily imitate the processes of Nature, as to produce the following artificial mineral waters, in the several classes of acidulous, alkaline, bitter-saline, simple and acidulous chalybeate waters, and likewise sulphureous waters, that after having undergone the most scrupulous examination, have been approved and recommended by the most celebrated proficients in chemical science. The good effects of these factitious waters the learned Professor Bergman often found even superior to natural ones, in hæmorrhoidal affections, in arthritic pains, and in obstinate intermitting fevers.

The Seltzer waters prepared by Messrs. Paul and Co. have been used with advantage in catarrhs, rheumatism, asthma, and in bilious and putrid disorders; they prove diuretic and antiseptic even when externally employed. They are serviceable in spasmodic affections of the

stomach; and they promote digestion. They may be mi ed with milk, with wine, or with syrup of capillaire. He likewise manufactures Seltzer water, either strong or weak, which to the properties of the Seltzer water, formerly imported in great abundance, unite the tonic and stomachic qualities which the preparations of iron are known to possess

Our desire to point out the means of relief to the afflicted will not permit us to omit the mention of the gaseous alkaline water (water impregnated, according to the discoveries of Dr. Priestley, with fixed a r), or, as it is now termed, carbonic acid. This is highly commended in cases of gravel and stone, affords very great relief to the pain which accompanies these complaints, and is also an excellent antiseptic drink; is a proper vehicle for taking the powder of cinchona bark in putrid diseases; and, being mixed with port-wine, imparts to it the exhilarating effects of that of champagne. These, and other excellent medicated waters that we have not room to mention, may be had of Messrs. Allen and Co., Plough-court, Lombard-street, and of the chemist already mentioned in page 105 of this work.

We must now briefly notice some of the medicinal waters which Nature has bountifully bestowed on this favoured island. The city of Bath, in Somersetshire, has long been celebrated for its hot springs, which are of a higher temperature than any other in this empire, and, indeed, are the only natural waters which we possess that are all at hot to the touch, all the other thermal waters being of a heat below the animal temperature, and only exceeding the general average of the heat of common springs. There are three principal sources of these waters; namely, the King's Bath, the Cross Bath, and the Hot Bath, which all arise within a short distance of each other. The supply of water is so copious, that all the large reservoirs used for bathing are filled every evening with water, fresh from their respective fountains.

This water, when drank fresh from the spring, has in most persons, especially in invalids, a tendency to raise, and rather accelerate the pulse, increasing the heat of the body, and promoting its secretions. It operates by urine and insensible perspiration: on first using it, a patient is apt to complain of drowsiness and weight of the head; but these effects soon disappear. Taken in small quantities, it induces costiveness; but this may be corrected by increasing the dose, when it will rather act as a purgative

A course of these waters is recommended to be preceded by a regimen as to diet, and, in case of full and sanguine habits, bleeding may be proper. The seasons for drinking them are the months of April, May, June, August, September, and October; and a course should continue six weeks. They may be taken in quantities of from one pint to two quarts in a day, beginning with small doses, and increasing as they sit on the stomach and agree with the constitution: in whatever quantities, however, they are administered, the dose for the day should be divided into three unequal parts; the largest to be swallowed before breakfast, the next in quantity before dinner, and the smallest before supper: the doses should be taken an hour before each meal. Immediately after taking the

water, the patient should use moderate exercise; and during the whole course, regard must be had to regimen in diet, and hours; and the mind should be kept in as tranquil a state as possible. Used internally, these waters appear chiefly to exert their stimulating properties on the stomach. When they are likely to prove beneficial, they excite, on being first taken, a pleasing glow in this organ; which is soon succeeded by an increase of appetite and spirits, and a quick determination to the kidneys. On the other hand, when they sit heavy on the stomach and produce sickness; when they occasion head-ach, thirst, and dryness of the tongue, and do not pass off by urine or perspiration, their operation is unfavourable, and the further use of them is not to be recommended. To the young and plethoric they are frequently injurious, and, unless some evacuations are premised, often at first disagree; occasioning head-ach, heat in the hands, drowsiness, and giddiness. Physicians have concurred to forbid the use of the Bath waters in cases of inflammatory rheumatisms, inflammations on the lungs, and particularly if they tend to suppuration.

The Bath waters are said to electrize the nerves and fibres, to correct acrimonious putridity, to strengthen the tone of the bowels and stomach, and to invigorate the whole human system. Great relief has been obtained from Bath waters in cases of painful menstruation, in spasms occasioned by the poison of lead, in St. Vitus's dance, and in those biliary concretions commonly called gall-stones; but in these cases the use of them must be accompanied with the Castile soap, and sometimes a detergent purge of rhubarb with tartarised kali, or the like.

The virtues and effects of these waters have been applied externally, with great advantage, in many paralytic complaints, rigidity, sprains, relaxation of the joints, and in other disorders of the limbs occasioned by obstructions; in old sores, in diseases of the skin, and in restoring strength and pliability to the joints and limbs after long and weakening fits of the gout and rheumatism. When particular parts of the body are affected, pumping on the diseased limb is to be preferred to general bathing. The mud and scum of these waters have been successfully employed with good effect by way of poultice in hard swellings, in weak joints, in contractions of the limb, in scald heads, running ulcers, and in many cutaneous and leprous eruptions: herbs are sometimes boiled with them in the Bath water to a proper consistence for these and the like indispositions.

It is in most cases proper to join the internal to the external use of these waters, if the former should occasion a roughness and erysipelatous redness on the skin, especially of those who are scorbutic, after taking them; no danger need be apprehended, as it will disappear after the course has been some time continued.

With regard to the medicinal effect of the Bath waters, a physician (not one of the physicians resident at Bath) hath lately said, that much of their salubrious influence is owing to the natural degree of warmth peculiar to these springs, which for ages have preserved an admirable uniformity of temperature; that one of their most important uses is their EXTERNAL application; and that in this respect they do not appear to differ from common water, when heated to the same temperature and applied under similar circumstances. The learned Dr. Falconer, however, is of opinion that the Bath waters possess further powers, of specific

qualities more stimulating to the nervous system, than a common warm bath.—The four principal waters in England that possess any remarkable heat, are those of Bath, Buxton, Bristol, and Matlock; the first of which raises Fahrenheit's thermometer from one hundred and eight to one hundred and nineteen degrees; the second to about eighty; the third to seventy-six; and the last to sixty-six or sixty-eight.

Bagnigge Wells, near London, is much frequented in the spring. It is a salt purging water, containing in the gallon two hundred and fifty-seven grains of sea-salt and vitriolated magnesia mixed: it is therefore a useful purgative water, and is also diuretic. The dose is from a pint to a quart; but it is usual to quicken its operation with vitriolated natron, or some other cathartic salt. In small doses, it is alterative, antiscorbutic, antacid; relieving heart-burn, vertigo, and pains of the head. It is prescribed as a remedy for pimples, heats, and other eruptions of the face; and as a cure for worms, by scowering away the slimy viscid humours which lodge and nourish these troublesome guests in the intestines. If the cold water disagrees with the stomach, it may be warmed without lessening its purgative qualities; or those who have weak stomachs may add to each dose of the water a tea-spoonful of the tincture of cardamoms; or they may chew and swallow cardamoms, caraways, or other warm seeds. It is always advisable to use gentle exercise, and to take a liquid diluting breakfast, of tea, water-gruel, or whey, during a course of this water.

The chalybeate well is about forty yards from the purging well. The catalogue of diseases for which these waters have been prescribed will hardly come within the compass of our present undertaking; suffice it to say, that in glandular obstructions, bilious habits, beginning consumptions, atrophy, and in nervous debilities, we have reason to believe they have been of service.

Barrowdale. This spring is about three miles from Keswick, in Cumberland. It is a salt water, and much of the nature of that of the sea. A gallon of this water affords seven ounces and two drachms of sea-salt mixed with a little vitriolated magnesia. It is a brisk and rough cathartic even to strong constitutions, occasioning great thirst, and heating the body. A pint is usually sufficient for a dose. Taken in half or a quarter of a pint, it is a useful alterative, and operates by urine. It is of excellent use in scorbutic complaints, in scrophula, and the leprosy. It is also powerful in removing chronic obstructions; in clearing the blood of acrimonious humours; in diseases of the skin; and in all those complaints in which sea-water is serviceable. Like that, also, it may be used externally by way of fomentation; or as a bath in glandular swellings, and in disorders of the skin.

Bristol Hotwells. This spring issues from a lime-stone rock, on the bank of the river Avon, about a mile below Bristol, between high and low water-mark. Its medicinal virtues are said to have been originally discovered by some seamen, who, frequenting this place, found the water serviceable in curing the itch and healing old sores. It was not noticed till the beginning of the seventeenth century, nor did it arrive to any degree of reputation till the end of it, when the magistrates of Bristol thought it worth their care, and secured it from the tide by a high wall erected round the spring: various improvements have been since made

to this security. The Bristol water appears to the naked eye transparent, colourless, and manifestly impregnated with air, sparkling and bounding through its substance in the form of little bubbles, so that the whole seems to be in a ferment: to this cause we may attribute the property of this water to keep untainted any length of time in hot climates; it therefore forms a most valuable provision for long voyages, and is accordingly exported in great quantities to distant parts.

This water is without smell, peculiarly soft, pleasant, and agreeable to the taste, and to the touch barely lukewarm. For common drink at meals, it should stand uncorked a few hours after it is brought from the well, or the bottle uncorked may be set in a vessel of warm water: it is usually mingled with wine, but is much better unmixed.

Little preparation is necessary for the drinking of these waters; yet the following directions may be of use. To the sanguine, the florid, and those of grosser habits, some preparatory evacuations may be serviceable; thin, pale, enervated, and phlegmatic patients will be rather injured by any. Where the stomach or intestines are clogged with a gross glutinous phlegm, gentle purgatives are necessary; and in such cases, no medicine can be used with better effect than magnesia alba, which may be administered with safety at all times and seasons.

Emetics should only be admitted as preparations for the Bristol waters, when there is not any apprehension of an inflammatory diathesis affecting the intestines: should any of the internal viscera be affected, the administration of vomits may be attended with danger.

In inflammatory fixed pains, or in cases of giddiness brought on by the use of the waters, bleeding may be proper; but it is seldom or ever necessary as a preparative.

The method commonly recommended to invalids for taking these waters, is to begin with a single glass containing a quarter to half a pint before breakfast, as early as the patient chooses to rise, and another in the middle of the afternoon between dinner and supper, adding another glass in each interval at the distance of a quarter of an hour the second day, and another glass may be added in like manner on the third day; and this, allowing for variation of constitution and circumstances, may continue to be the course. Some patients take two glasses in a morning, interposing between them half an hour spent in gentle exercise; and taking two more glasses in like manner about the middle period between breakfast and dinner, and then seldom take more of the water in the course of the day.

This water is regarded as beneficial in several disorders of the alimentary canal; in the symptoms of indigestion and loss of appetite which often afflict Europeans who have resided many years in hot climates. In bilious diarrhœas, in diabetes, in all disorders of the lungs proceeding from neglected colds, fevers, and inflammations, the Bristol waters are held to be highly efficacious. In internal hœmorrhages of all kinds, whether the blood passes by urine or stool; in the piles, or by immoderate discharge of the menses, these waters afford relief; for as the Bath waters are proper where the secretions are defective, so the Bristol water is of service when they are in excess. The Bath water WARMS; the Bristol water COOLS. The hotter-months are best for using it: regardless of the rules of drinking above mentioned, some tak-

a pint to two quarts a-day, in repeated doses of one-fourth of a pint, or double that quantity. In obstinate gleets, in cases of preternatural thirst, and in diabetes particularly, it is permitted to be drank as freely as the thirst requires.

The diseases for which these waters have been drank are of very opposite natures; therefore the same benefit cannot be expected in all. In consumption, there are some authenticated cases of cure where the disease was at its commencement and the constitution was not broken down; but where it has made progress, and hectic symptoms are far advanced, little is to be expected from this mineral production, or any other remedy.

Bristol-well waters are advised to be used externally in washing old sores and ulcers, whether of a scrophulous or a cancerous nature; as a collyrium in the case of inflamed eyes, and in particular where the eyelids are tender or excoriated.

Buxton, in Derbyshire. This water, which is of moderate warmth, and has long enjoyed a considerable degree of reputation, is clear and transparent, and perfectly inoffensive to the taste, containing neither steel, sulphur, nor any kind of acidity in its composition; but having a small quantity of sea-salt and a still smaller quantity of purging-salt. As an internal medicine, Buxton water possesses great activity; it increases the vital heat, and is of course serviceable in the cure of many diseases. In deranged symptoms of the stomach and alimentary canal, where these have been the effect of intemperance; in hard tumors of the joints; in contraction of the vessels and limbs, especially from age; in habitual vomitings; in cramps, convulsions, gout, rheumatism, and paralytic disorders; in the dry or convulsive asthma unattended with fever, and also in defective menstrual discharges, these waters are beneficial. The painful complaints incident to persons afflicted with the stone and gravel are much assuaged by them; but they are prohibited in cases of active inflammation, or where a strong determination to the lungs prevails.

Of these waters, which are alterative and not evacuant, about a pint is taken in the course of the forenoon, and the quantity is gradually increased. The season for drinking the Buxton waters is usually from the beginning of May till the end of October.

The use of the baths at Buxton is serviceable in the maladies already mentioned; also in nodes and chalky swellings. The chronic rheumatism succeeding the acute, and where the inflammation has been seated in particular limbs, is wonderfully relieved by them.

There is in the neighbourhood a chalybeate water, which may be used by those for whom it may seem proper.

Cheltenham, in Gloucestershire, six miles from Gloucester. The medicinal spring that has its source at this town has been found of essential service in bilious disorders, and in the cure of glandular obstructions, especially those that affect the liver, and the other organs connected with the functions of the alimentary canal. It has also a good effect in creating an appetite, in some cutaneous complaints usually termed scorbutic eruptions.

The season of drinking the Cheltenham waters is during the whole of the summer months. This, like the Bristol water, should always be drank at the fountain head, and never long exposed to the air. Half a pint of

this purging chalybeate water is sufficient for a single dose; and this quantity, repeated at different intervals during the day, is generally enough to produce the desired effect on the bowels, without griping or other uneasy sensations, strengthening the organs of digestion, and invigorating the whole constitution.

HAMPSTEAD. The chalybeate water of this place is of the nature of that of Islington, but somewhat stronger. The dose is from half a pint to two or three pints: its virtues and efficacy have been celebrated in several elaborate treatises. It is of a perfectly transparent colour. Its taste is strongly mineral, though not unpleasant; and, after it has been some time in bottles, it sparkles like the Pyrmont water. It is recommended as serviceable in glandular obstructions; in the scurvy, gout, stone, and rheumatism; in eruptions of the skin; in piles; in nervous and hysteric disorders; and in weaknesses, whether acquired or constitutional.

This water sits easy on the stomach, operates mostly by urine, and deserves more to be attended to than it is at present.

HARROGATE, Yorkshire. The waters of this place, though they rise from different springs, are alike in quality. They are transparent, throw up a great number of transparent air-bubbles at the surface, and have a fœtid sulphureous smell. When these waters are taken as a purgative, the dose required will be from two to four pints: in this way it is efficacious in destroying worms. In smaller quantities, it is a good alterative in scrophula and diseases of the skin. It may be used at the same time outwardly, by way of bath or fomentation, as a remedy for those disorders in which waters strongly impregnated with salt and sulphur are beneficial.

ISLINGTON. The spring of this water rises on the south west side of Islington, which now, in a manner, joins the city of London. This is a pleasant, clear, light chalybeate water, which has been long in repute. It is said to be serviceable to restore the appetite, brace relaxed habits, and to raise the spirits; hence it may be of use in hypochondriac, paralytic, and other nervous disorders. It is also recommended in female weaknesses, whether occasioned by frequent miscarriages, or the fluor albus; in the gravel, palsy, and diseases of the skin.

This water operates chiefly by urine, and may be drank to the quantity of several half pints. It may be rendered more strongly chalybeate by adding to each pint of the water a grain or two of vitriolated iron; and it deserves much more of the public regard than it has lately obtained.

MALVERN, in Gloucestershire. There are two noted springs at this place; one of them is called the Holy Well. They rise at some distance from each other: are nearly of the same description, being both chalybeate, light, agreeable to the taste; and are remarkable for being almost entirely free from any earthy matter. They are recommended in glandular complaints; in scorbutic, scrophulous, and cancerous disorders; in diseases of the skin, sores, and ulcers; in obstructions of the female discharges; in palsy, gout, gravel, and stone; and in external applications, particularly of the eyes.

Contrary to all other baths, it is usual here to bathe in the body-linen, and to leave it wet about the body, and suffer it to dry there: it being remarkable that the waters of these springs, though free from salt, are no

more apt to give cold than sea-water. Linen cloths kept constantly wet must be applied to the diseased parts.

Previously to the external use of these waters, they should be taken internally for some days, in such quantities as the stomach will bear; as in some cases they excite sickness, and purge, though they more commonly act as a diuretic.

MATLOCK, Derbyshire. The waters of the several springs at this place are very slightly chalybeate, and occasion petrifaction; in other respects they resemble those of Bristol, being, like them, of a moderate warmth: they are recommended in most cases where the Bristol waters are used.

NEVILHOLT or NEVIL-HOLT, Leicestershire. This water is recommended as a powerful antiseptic in putrescent disorders: it is perfectly transparent and void of smell when it is fresh from the fountain, but it loses its transparency, and becomes fœtid, when it is exposed to the air for any considerable time. It is somewhat rough and bitter to the taste. It acts by stool, urine, and perspiration, but requires a pretty large dose to produce the former effect. It is recommended in all cases of weakness and relaxation; in discharges of blood and other old fluxes; as a good remedy in old diarrhœas: against gleets in both sexes; atrophy, dropsy, gravel, arthritic diseases, and other chronic complaints: in acute and inflammatory diseases it is said to be rather hurtful.

PANCRAS, Middlesex. The water of this well acts as a cathartic and diuretic; it contains a purging salt, and a small quantity of sea salt, yet it is almost tasteless. It is said to be useful in the gravel and scurvy, to help digestion, and restore the appetite.

CARBOROUGH, Yorkshire. Near this town are two springs, distinguished by the several names of the purging and the chalybeate wells; but they seem to differ more in degree of strength than in the properties of the waters. They are both brisk, active, and pungent to the taste, throwing up bubbles of air when they are poured out of a bottle into a glass, and both apparently abounding with fixed air. Neither of these waters will bear exposure to the air. They have been recommended in general relaxations; as a tonic to restore the system after too copious or excessive evacuations of any kind; in all disorders of the stomach arising from flatulence, indigestion, or acidity; in hypochondriac and hysteric complaints; in asthma, scurvy, obstructions, and rheumatic pains; and they are said to be excellent in allaying the heat of hectic fevers.

The purging waters may be drank in half-pint glasses at small intervals, till stools are procured, for which purpose from one quart to three pints is generally sufficient. The chalybeate-water is less purgative, operating principally as a diuretic: both waters contribute to give the patient unusual gaiety of spirits, and the patient has here an opportunity of breathing pure air, and of bathing in the sea.

Such of our readers as wish to be informed of the amusements, accommodation, &c. at this and other watering-places, at Brighton, Margate, Weymouth, &c. we refer to the "GUIDE TO THE WATERING-PLACES," published by R. PHILLIPS, Bridge-street, Blackfriars.

SOMERSHAM in Huntingdonshire. This water rises on the side of a small hill, about three miles from St. Ives.

It is a chalybeate strongly impregnated with vitriol of iron and alum is much stronger in dry than in wet seasons; and may be drank at the

spring head from the beginning of May to the beginning of October, though it will bear carriage to any distance: nor will its virtues be impaired by keeping, provided it is bottled at a proper time, and well corked; but it should be carefully decanted or strained after keeping, as it will drop a sediment. It may be taken before breakfast in the quantity of three large wine-glasses, at half an hour's distance from each other: each dose should be warmed with a small quantity of common spring water heated, or with powdered caraway or cardamom-seeds, the patient in the intervals keeping in gentle motion either on foot or on horseback, otherwise this water is apt to occasion a giddiness, or sickness at the stomach; and he may eat a little preserved ginger, if it can conveniently be had, to obviate the nausea that this medicine may excite.

This water is also sometimes directed to be taken mixed with an equal quantity of new and warm cow or ass's milk: or a whey made from it, by boiling equal portions of the water and milk till the curd spearates, which should then be carefully taken away. This method of administering it is advisable in consumptive cases. But in whatever way it is given, it will be necessary to give the patient a cathartic before the course is begun; this may be done with such medicines as are most suitable to the disorder and constitution. In ordinary cases, a solution of half an ounce or an ounce of vitriolated magnesia in a glass of the chalybeate water, warmed as before directed, will be a proper detergent dose: a smaller quantity of the cathartic salt may afterwards be added, as occasion requires. It may also be expedient to observe that this water, as well as all other ferruginous medicines, is apt to change the colour of the stools, which generally become black.

It has been much recommended to remove putrid crudities of the stomach; in debilities of the stomach and bowel; in jaundice; in obstructions of the liver and spleen; in scurvy, and consumptions from scorbutic habits: in diabetes, worms, and schirrous tumors; in dysenteries, in profuse hæmorrhages, and in many other disorders. It may also be applied externally to foul ulcers and cancers. But it is no advisable for persons who are troubled with acidities in the stomach, which it rather tends to increase than correct; nor should it be prescribed to those who are affected with asthma, dropsy, or swelled legs; or to those who are affected with virtigo, or giddiness of the head; in obstruction of the female discharges, and in full habits, it is hurtful; nor should it be taken in any case without proper previous evacuation by purging. A regimen as to diet is absolutely necessary during a course of these waters: the food should be light, plain, and easy of digestion.

Tilbury, in Essex, near Tilbury Fort. This wateris not quite limpid at the well, but somewhat straw-coloured. It operates chiefly by urine, though it is also somewhat purgative, and increases perspiration. It excites an appetite, and helps digestion; is efficacious indropsical swellings, in scorbutic and scrophulous disorders, and in those diseases of the skin which are occasioned by glandular oostructions. It is remarkable that this water produces a sensation like that of a ben umbed limb when it approaches the fire, though in a less degree. From a pint to a quart of Tilbury water, according to circumstance, may be taken in a day.

Tunbridge Wells, Kent. The two medicinal springs which are known by the name of Tunbridge Wells, rise contiguous to each other.

above five miles to the southward of Tunbridge. There is no perceptible difference in the quality of the water of these springs, which are chalybeate, taste strongly, though not disagreeably, of iron, and contain also a small portion of sea-salt. This water, exposed to the air, soon loses its virtues, as it does also by keeping a few days; it must therefore be drank at the wells, the exercise of going for that purpose, and returning, adding in no small degree to the virtues of the water, which has long been celebrated as a tonic in the diseases peculiar to women, whether arising from chlorosis, fluor albus, or from a profuse flow of the periodical discharge; disorders that are at once debilitating and painful, and that are frequently the causes of abortion, and sometimes of sterility. The stimulant and diuretic properties of the Tunbridge well water recommend it as efficacious for increasing the appetite, accelerating the circulation, and in the removal of obstructions of the liver, jaundice, and dropsy; for this mineral not only promotes the secretions by stool and perspiration, but it is particularly useful, by promoting a regular determination to the kidneys, and in removing obstructions of the urinary passage; it has also the reputation of being destructive of worms, and of curing chronic disorders arising from laxity and weakness of the solids. It is, however, improper in all inflammatory cases, except, indeed, in those feverish exacerbations occasioned by the green-sickness, and which in that disease generally give way to the persevering use of this, and often to other chalybeate medicines. Externally applied, it is said to assist weak and sore eyes, and to remove pimples and other eruptions o the skin.

The season for drinking this water is from the beginning of June till Michaelmas. A little preparation is advisable; in most cases gentle purging is sufficient; but in gross and sanguine habits, other evacuations are required.

In entering upon a course of the Tunbridge waters, a regimen is also necessary: the food should be light; and that part of it which consists of animal flesh should be mutton, fowls, and game, rather than beef or pork: veal and lamb are also to be allowed. The bread should be pure, and well baked; and the less wine is taken the better.

The quantity of the waters required can only be ascertained by circumstances: the age, constitution, and complaints of the patient must be considered, and more or less of this mineral administered as may be found necessary. It is best to begin with a small dose, not exceeding a quarter of a pint, about half an hour before breakfast, to be repeated at regular intervals, once or twice before noon. The quantity may be soon augmented to half a pint at each dose; and if, as is often the case on entering on a course of mineral waters, giddiness, a disposition to sleep, nausea or vomiting, should happen, these symptoms will disappear after a little use: but when, after due trial, this does not happen, the patient may conclude that the waters are unsuitable to his complaint or constitution.

It is common for those who drink the water at Tunbridge Wells to mix occasionally a tea-spoonful or more of common salt, or of vitriolated magnesia, with the first glass of the water, in order to make it operate by stool; others, in case of an extreme irritability of the stomach, caraway or cardamom-seeds, or some warm confection, after each glass; as

this water is apt to occasion sickness, especially where the stomach is loaded with impurities. It is also customary to pour the water into a bottle, and, after closing it carefully with a cork, that the chilliness of the medicine may be diminished, with the escape of as little of the fixed air as possible, immerse the vessel in hot water: by this means the mineral water will be accommodated to the temperature of the stomach.

WITHAM, Essex. This chalybeate spring rises about three quarters of a mile from the town of Witham into a small reservoir, from whence it is brought up by a pump. This water operates chiefly as a diuretic, and is recommended in nervous, hypochondriac, and hysteric disorders; to promote digestion, and to restore the appetite; to check vomiting, and allay hectic heats; to relieve chronic-colicky pains; to restore the constitution when it has been debilitated by excesses; and it is said to have afforded relief in the first stages of dropsy, in scurvy, asthma, and gravel.

It must be drank at the spring, in such quantities as the stomach will receive without nausea. Temperance, light suppers, early rising; moderate exercise in the open air, as riding, sailing, swinging; agreeable company, and rational amusements; all concur in promoting the salutary operation of these medicinal treasures;—treasures prepared in the laboratories of Nature, from her "congregated stores."

> When gush the streams, the ceaseless fountains pla
> And their unfailing wealth the rivers draw.
>
> THOMPSON.

APPENDIX.

CONTAINING

A BRITISH FAMILY HERBAL.

A LIST OF SIMPLES,

AND OF SUCH

Medicinal Preparations,

AS OUGHT TO BE KEPT IN READINESS

FOR PRIVATE PRACTICE OR FAMILY USE.

THE METHOD

OF

PREPARING AND COMPOUNDING SUCH MEDICINES

As are recommended in the former part of the Book,

WITH THE

DITION OF SEVERAL OTHERS OF A SIMILAR NATURE.

REMARKS

ON THE

DOSES USES, AND MANNER OF APPLYING

THE

DIFFERENT PREPARATIONS.

Medicamentorum varietas Ignorantiæ filia est.

BACON

INTRODUCTION.

IGNORANCE and superstition have attributed extraordinary medical virtues to almost every production of nature. That such virtues were often imaginary, time and experience have sufficiently shewn. Physicians, however, from a veneration for antiquity, still retain in their lists of medicine many things which owe their reputation entirely to the superstition and credulity of our ancestors.

The instruments of medicine will always be multiplied, in proportion to men's ignorance of the nature and cause of diseases: when these are sufficiently understood, the method of cure will be simple and obvious.

Ignorance of the real nature and permanent properties of those substances employed in the cure of diseases, is another reason why they have been so greatly multiplied. Physicians thought they could effect by a number of ingredients, what could not be done by any one of them: hence arose those amazing farragos which have so long disgraced the medical art, and which were esteemed powerful in proportion to the number of simples that entered their composition.

The great variety of forms into which almost every article of medicine has been manufactured affords another proof of the imperfection of the medical art. A drug which is, perhaps, most efficacious in the simplest form in which it can be administered, has been nevertheless served up in so many different shapes, that one would be induced to think the whole art of physic lay in exhibiting medicine under as many different modes as possible.

Different forms of medicine, no doubt, have their use; but they ought never to be wantonly increased: they are by no means so necessary as is generally imagined. A few grains of powdered rhubarb, jalap, or ipecacuanha, will actually perform all that can be done by the different preparations of these roots, and may also be exhibited in as safe and agreeable a manner. The same observation holds with regard to the CINCHONA (Peruvian bark) and many other simples of which the preparations are very numerous.

Multiplying the ingredients of a medicine not only renders it more expensive, but also less certain, both in its dose and operation. Nor is this all. The compound, when kept, is apt to spoil, or acquire qualities of a different nature. When a medicine is rendered more safe, efficacious, or agreeable, by the addition of another, they ought, no doubt, to be joined; in all other cases, they are better kept asunder. The combination of medicines embarrasses the physician, and retards the progress of medical knowledge. It is impossible to ascertain the precise effect of any one medicine, as long as it is combined with others, either of a similar or dissimilar nature.

In the exhibition of medicine, regard should not only be had to simplicity, but likewise to elegance. Patients seldom reap much benefit from things that are highly disagreeable to their senses. To taste or

smell like a drug is become a proverb; and to say truth, there is too much ground for it. Indeed no art can take away the disagreeable taste and flavour of some drugs, without entirely destroying their efficacy: it is possible, however, to render many medicines less disgustful, and others even agreeable; an object highly deserving the attention of all who administer medicine.

The design of the following pages is, to exhibit such a list of drugs and medicines as may be necessary for private practice. They are considerably more numerous, indeed, than those recommended in the former part of the Book, but are still greatly within the number contained in the most reformed dispensatories. The same medicine is seldom exhibited under different forms; and where different medicines answer nearly the same intention, there is commonly no more than one of them retained. Multiplying forms of medicine for the same intention, tends rather to bewilder than assist the young practitioner, and the experienced physician can never be at a loss to vary his prescription as occasion requires.

The chemical and other difficult preparations are for the most part omitted. All of them that are used by any private practitioner are not worth preparing. He will buy them much cheaper than he can make them. Great care, however, is necessary, to obtain them genuine. They are often adulterated, and ought never to be purchased unless from persons of known veracity. Such of them as are in common use are inserted in the list of drugs and medicines. Their proper doses and manner of application are mentioned in the practical part of the Book, wherever they are prescribed.

Such articles of medicine as are to be found in the house or garden of almost every peasant, as barley, eggs, onions, &c. are likewise for the most part omitted. It is needless to swell a list of medicines with such things as can be obtained whenever they are wanted, and which spoil by being kept.

The preparations made and sold by distillers and confectioners, are also generally left out. These people, by operating upon a larger plan, generally make things better, while it is in their power to afford them much cheaper than they can be prepared by any private hand.

The quantity ordered of every medicine is as small as could well be prepared, both to prevent unnecessary expence, and that the medicine might not spoil by keeping. Almost every medicine suffers by being kept, and should be used as soon after it has been prepared as possible. Even simple drugs are apt to spoil, and should therefore be laid in small quantities; they either rot, are consumed by insects, or evaporate, so as to lose their peculiar taste or flavour, and often become quite insignificant.

In the preparation of medicines, we have generally followed the most improved dispensatories; but have taken the liberty to differ from them wherever our own observations, or those of other practical writers, on whose judgment we could depend, suggested an improvement.

In several compositions the ingredient on which the efficacy of the medicine principally depends is increased, while the auxiliaries, which are generally ordered in such trifling quantities as to be of no importance,

are left out, or only such of them retained as are necessary to give the medicine a proper consistence, or the like.

The colouring ingredients are, likewise, for the most part omitted; they increase the bulk and price of the medicine, without adding any thing to its value. It would be well if they were never used at all. Medicines are often adulterated for the sake of a colour. Acrid and even poisonous substances are, for this purpose, sometimes introduced into those medicines which ought to be most bland and emollient. Ointment of elder, for example, is often mixed with verdigrise to give it a fine green colour, which entirely frustrates the intention of that mild ointment. Those who wish to obtain genuine medicines should pay no regard to the colour.

Some regard is likewise paid to expence. Such ingredients as greatly increase the price of any composition, without adding considerably to its virtue, are generally either omitted, or somewhat less expensive ones substituted in their place. Medicines are by no means powerful in proportion to their price. The cheapest are often the best; besides, they are the least apt to be adulterated, and are always most readily obtained.

With regard to the method of compounding medicines, we have generally followed that which seemed to be the most simple and natural, mentioning the different steps of the process in the same order in which they ought to be taken, without paying an implicit regard to the method of other dispensatories.

We have followed the alphabetical order, both with regard to the simples and preparations. A more scientific method would have been agreeable to some persons, but less useful to the generality of readers. The different classes of medicine have no great dependance upon one another, and, where they have, it is hard to say which should stand first or last: no doubt the simple preparations ought to precede the more compound. But all the advantages arising from this method of arrangement do not appear equal to that single one, of being able, on the first opening of the book, to find out any article, which, by the alphabetical order, is rendered quite easy.

The dose of every medicine is mentioned, whenever it appeared necessary. When this is omitted, it is to be understood that the medicine may be used at discretion. The dose mentioned is always for an adult, unless when the contrary is expressed. It is an easy matter to proportion the dose of medicine exactly to the different ages, constitutions, &c. of patients; but, happily for mankind, mathematical exactness is not in EVERY CASE absolutely necessary; we have, however, inserted in the beginning of this Work, A LIST of the MEDICINES commonly used in Practice, with their proper DOSES.

Several attempts have been made to ascertain the proportional doses for the different ages and constitutions of patients, but, after all that can be said upon this subject, a great deal must be left to the judgment and skill of the person who administers the medicine. The following general proportions may be observed; but they are by no means intended for exact rules. A patient between twenty and fourteen may take two-thirds of the dose ordered for an adult; from fourteen to nine, one-half; from nine to six, one-third; from six to four, one-fourth; from four to two, one-sixth; from two to one, a tenth; and below one, a twelfth.

N. B. The Apothecary's weights, and the English wine-measures, are used throughout the whole book, the different denominations of which will appear from the following Table:

A pound contains	twelve ounces.	
An ounce - - - -	eight drachms.	
A drachm - - - -	three scruples.	
A scruple - - - -	twenty grains.	
A gallon contains	eight pints.	
A pint - - - -	sixteen ounces.	
An ounce - - - -	eight drachms.	

table-spoonful is the measure of half an ounce.
A tea-spoonful is about one drachm.

FAMILY HERBAL.

A BRIEF ACCOUNT

OF THE

PRODUCTIONS OF THE

VEGETABLE KINGDOM, &c.

DIRECTED BY THE

ROYAL COLLEGE OF PHYSICIANS IN LONDON:

SHEWING IN ALPHABETICAL ORDER,

First, the Part used; 2dly, its Sensible Properties; 3dly, its Medicinal Virtues; and, lastly, the Mode of Exhibition.

Almonds, sweet and bitter——part used, The kernels of the fruit——sensible properties: The sweet, oily, bland; the bitter, oily, with a peculiar flavour and bitterness——medical virtues: The sweet obtunding; the bitter, sedative and diuretic——mode of exhibition; In substance, the oil being expressed from either kind indifferently. Sweet almonds are employed by trituration in making emulsions, or the milk of almonds.

Aloes Succotrine:——From the island Socotora.

Aloes Hepatic, or common aloes, from the island of Barbadoes——sens. prop. Smell, ungrateful; taste, extremely bitter. The Succotrine have something of an aromatic flavour, which renders them the least disagreeable—med. virt. Purgative, stimulant—mode of exhib. Pill; powder; solution; tincture.

Amber: A solid bituminous substance, dug out of the earth or found on the sea-shore, principally in Polish Prussia and Pomerania—sens. prop. Fragrant when rubbed or heated; nearly insipid—med. virt. Tonic—mode of exhib. Oil; powder; salt; tincture.

Angelica, Garden:—Part used, The leaves, stalks, seeds—sens. prop. Aromatic—mode of exhib. Chiefly as ingredients in some distilled waters and aromatic tinctures.

Anise: An unbelliferous plant, cultivated in the south of Europe—part used, The seeds—sens. prop. Smell, diffusive and aromatic. Taste, sweet and warm—med. virt. Stimulant—mode of exhib. Powder; infusion; oil also in compound spirit of.

Arabic, Gum: A concrete juice exuding from a tree growing in Egypt—sens. prop. Mucilaginous—med. virt. Obtunding—mode of exhib. In mucilage, or strong solution in water strained; also in troches, formed with starch, sugar, &c.

Artichoke.—Part used, The leaves—sens. prop. Bitter—med. virt. Diuretic—mode of exhib. Expressed juice; also in infusion.

Arum. See Cuckow-pint.

Asafœtida: The gummy resinous juice of a plant growing in Persia—sens. prop. Smell, extremely fœtid; taste, acrid and nauseous—med virt. Stimulant, antispasmodic, anthelmintic—mode of exhib. Pill; emulsion or milk; tincture.

Asarabacca: A low perennial plant grown in gardens—part used, The leaves—sens. prop. Smell, strong, but not ungrateful; taste bitterish, acrid—med. virt. Stimulant, emetic, purgative—mode of exhib. In powder, as snuff.

Balustines: The product of the pomegranate, a low tree, or rather shrub, growing wild in Italy and other countries in the south of Europe—part used, The flowers and rind—sens. prop. Astringent. Fruit, tart and roughish—med. virt. Tonic, cooling—mode of exhib. Juice of the fruit; infusion and decoction of the flowers and rind.

Balm: A plant with labiated flowers, cultivated in gardens—part used, The leaves—sens. prop. Smell, very ungrateful. Taste, lightly aromatic and roughish—med. virt. Tonic—mode of exhib. Infusion or tea, acidulated with lemon-juice, is an excellent diluent drink in febrile complaints.

Balsam Canada: A liquid exudation from a species of pine-tree growing in North America—sens. prop. Smell, fragrant; taste, moderately pungent and bitterish—med. virt. Tonic, stimulant—mode of exhib. In pills, or in a state of solution, united to watery liquids by yolk of egg, or mucilage of gum-arabic, honey, or sugar.

Balsam of Capivi: A liquid exudation from a tree growing in Brazil—sens. prop. Smell, strong and diffusive; taste, acrid and bitterish—med. virt. Tonic, stimulent, diuretic—mode of exhib. In pills; dropped on sugar; united to watery liquors by egg or mucilage.

Balsam of Peru: A liquid exudation from a tree growing in Peru—sens. prop. Smell, fragrant; taste, very hot and pungent—med. virt. Stimulant, antispasmodic—mode of exhib. By itself in pills: mixed with watery liquors by means of egg or mucilage; also in tincture.

Balsam of Tolu; A thick resinous exudation from a tree growing in South America—sens. prop. Smell, extremely fragrant; taste, mild and grateful—med. virt. Lightly stimulant, in cold debilitated habits; also corroborant in gleets and weaknesses—mode of exhib. In decoction, pills, tincture, and syrup.

Bark, Peruvian. See Cinchona.

Barley: A species of corn commonly cultivated: when decorticated, it is usually called French, or Pearl Barley—med. prop. Mucilaginous, nutritious, obtunding—mode of exhib. In decoction; being first decorticated, it is boiled in water: sometimes, blended with figs, liquorice, and raisins, it is taken as a pectoral drink. Barley, when boiled, forms an excellent article of nourishment; a decoction of it properly acidulated is one of the best beverages in acute diseases.

Bay: An evergreen tree or shrub, cultivated in gardens—part used. The leaves and berries—sens. prop. Leaves, weakly aromatic, and roughish; berries, more aromatic and unctuous: the former are tonic. Two scruples to a drachm of the dried leaves have been taken as tea,

to resolve viscid humours, strengthen the stomach and cure the flatulent colic. Externally, the berries are employed in the decoction for fomentation.

Bears-Foot, is a perennial plant, a native of England, growing wild in meadows and shady places—part used, The leaves—sens. prop. Smell, disagreeable; taste, bitterish, and very acrid—med. virt. Anthelmintic—mode of exhib. From five to fifteen grains of the dried leaves may be given; or a drachm may be taken in the form of decoction; or one to three tea-spoonfuls of the expressed juice of the fresh leaves, made into a syrup with coarse sugar, are given every morning and evening, to children five or six years old; or two drachms to half an ounce of the dried leaves being infused in a pint of boiling water, a cupful or two is frequently given as a domestic medicine to destroy worms. It ought to be given very sparingly at first, these leaves being so violent in their operation, when incautiously taken, as to have produced fatal effects.

Benzoine, or Benjamin:—A concrete resin, exuding from an East Indian tree—sens. prop. Very fragrant, with little taste. The flowers of Benjamin produced by sublimation are very pungent and saline—med. virt. Stimulent; vulnerary—mode of exhib. Dissolved in rectified spirit for external purposes. It may also be employed in vapour. The flowers are taken internally in substance, in doses of five to ten grains, mixed up with simple syrup, in asthmatic and other pectoral diseases.

Bistort-Root, or Snake-Weed: A perennial plant, growing wild in moist situations—part used, The root—sens. prop. A strong simple astringent—med. virt. Tonic—mode of exhib. Powder; decoction; infusion. This is one of the strongest of our vegetable astringents. Dr. Cullen frequently employed it, by itself, and with gentian, in agues. He gave it to the quantity of three drachms in one day.

Bole, French: An earth of the argillaceous kind, impregnated with iron—sens. prop. Absorbent, astringent—med. virt. Desiccative—mode of exhib. Powder; electuary; liniment.

Brook-lime: A low plant, growing in wet ditches—part used, The herb—sens. prop. Roughish, bitterish, slightly pungent—med. virt. Antiseptic—mode of exhib. Eaten crude. The expressed juice may also be taken as an antiseptic.

Broom: A shrubby papilionaceous plant, growing wild—part used, The green twigs and seeds—sense. prop. Bitter and nauseous—med. virt. Aperient and diuretic—mode of exhib. The twigs in infusion, from which an extract is also prepared. The seeds in substance. A decoction of green broom drank freely, with the occasional addition of spirit of nitrous æther, is useful in anasarcous cases.

Buckbean: A perennial plant, growing in marshy situations—part used, The leaves—sens. prop. Simply bitter—med. virt. Tonic, aperient, stomachic—mode of exhib. Infusion.

Buckthorn: A prickly bush, growing in hedges—part used, The root—sens. prop. Smell, ungrateful; taste bitter, acrid, nauseous—med. virt. Strongly purgative—mode of exhib. The expressed juice, with the addition of cinnamon, ginger, nutmeg, and sugar, is formed into a syrup, that is often added to purgative lavements.

Burdock: A plant with compound flowers contained in prickly heads,

growing wild—part used, The root—sens. prop. Sweetish, with a slight bitterness and roughness—med. virt. Diuretic and Sudorific—mode of exhib. Decoction: two ounces of the fresh root boiled in three pints of water till reduced to two pints: the strained liquor may be drank in the course of twenty-four hours, in scurvy, rheumatism, and dropsy.

Calamus Aromaticus, or Sweet-scented Flag: A perennial plant growing in marshy situations—part used, The root—sens. prop. Smell, aromatic; taste, warm and bitter—med. virt. Tonic—mode of exhib. Infusion; tincture; also in decoction.

Camomile: A trailing plant, with compound flowers, cultivated in gardens—part used, The leaves and flowers—sens. prop. Smell, Strong; most agreeable in the flowers. Taste, nauseous and bitter—med. virt. Tonic, aperient, antiseptic—mode of exhib. Powder; infusion; extract of, formed into pills. Externally: in decoction for fomentations; also for clyster with mallow-flowers and fennel-seeds.—The Roman, or double-flowering camomile are the strongest, and yield most essential oil. These flowers have been long celebrated as a stomachic; and answer, says Dr. Cullen, the purpose of any other bitter. Previously to the introduction of the Peruvian bark, they were much employed in the cure of intermittent fevers. Dr. Pitcairn thought them in that respect equal to cinchona.

Campher: A solid concrete obtained from a tree growing in Japan and Sumatra—sens. prop. Smell, fragrant and penetrating; taste, pungent, with a sense of coolness—med. virt. Stimulant, antispasmodic, diuretic—mode of exhib. In pill or bolus; in watery emulsion with sugar or mucilage. Externally: dissolved in oil or rectified spirit; also in ointments and liniments.

Canella: The bark of a tree growing in the West Indies—sens. prop. Smell, aromatic: taste, warm and pungent—med. virt. Aromatic, stimulent stomachic—mode of exhib. Powder, also in the compound tincture of gentian.

Cantharides: Spanish flies; insects of the beetle kind, found in the South of Europe—sens. prop. Smell disagreeable; taste, highly acrid; caustic—med. virt. Stimulent, vesicating, diuretic—mode of exhib. Internally, in tincture; externally, in powder and extract formed into an ointment and plaster.

Caraway: An umbelliferous plant, cultivated in gardens—part used, The seeds; they contain a large proportion of essential oil—sens. prop. Moderately warm and aromatic—med. virt. Carminative, stimulant—mode of exhib. Powder, and said to be particularly corrective of the odour, taste, and griping quality of senna. From these seeds a spirituous water is distilled.

Cardamoms Lesser: The seeds of a perennial plant growing in the East Indies—sens. prop. Smell, very grateful; taste, warm and pungent—med. virt. Carminative, stimulant, stomachic—mode of exhib. Powder; tincture: which are frequently employed as correctors of medicines of the cold aperient class.

Carrot: An unbelliferous plant growing wild—part used, The seeds—sens. prop. Lightly aromatic and pungent—med. virt. Stimulent,

diuretic—mode of exhib. Powder, infusion, in scorbutic disorders and dropsy, and in diuretic drinks.

Cascarilla: The bark of a shrub growing in the West Indies—sens. prop. Aromatic and bitter—med. virt. Tonic, stomachic—mode of exhib. Powder; infusion; decoction; tincture; and extract. A useful medicine in bilious, remittent, malignant, and intermittent fevers.

Cassia Fistula: The pod of a tree growing in Egypt and in the East and West Indies—part used, The pulp lining the pod and its valves—sens. prop. Sweet, and lightly acrid—med. virt. Mildly purgative—mode of exhib. In electuaries.

Castor: The inguinal glands of the Castor or Beaver—part used, The internal friable matter—sens. prop. Smell, strong and ungrateful; taste, acrid and nauseous—med. virt. Stimulant, antispasmodic—mode of exhib. Powder; pill; bolus; tincture.

Catechu has erroneously been called Japan earth. It is an extract obtained by infusing the wood of a tree growing in the East Indies—sens. prop. Astringent, with a degree of sweetness—med. virt. Tonic—mode of exhib. Decoction; infusion; powder; tincture; in obstinate diarrhœas, dysenteries and other preternatural discharges.

Centaury, Lesser: A small annual plant, growing in dry situations—part used, The leaves and flowering tops—sens. prop. Simply bitter—med. virt. Tonic. In cases of atony, dyspepsy, jaundice—mode of exhib. Infused after the manner of tea; a tea-cupful two or three times a-day.

Cinchona: The bark of a tree growing in Peru. About the year 1640, the lady of the Spanish Viceroy, the Comitissa del Cinchona, was cured of an obstinate intermittent by this bark; and from the interest which Cardinal de Lugo and the Jesuit brotherhood took in its sale and distribution, it has been called Cardinal de Lugo's powder, Jesuits' bark, &c.; from the place of its growth, Peruvian bark; or simply, from its pre-eminent virtues, the BARK. In many foreign countries it is nevertheless better known by the name of Quinquina, or Cinchona—sens. prop. Smell, peculiar, not agreeable; taste, strongly bitter and astringent—med. virt. Tonic, antiseptic—mode of exhib. In powder; electuary; infusion; decoction; or the extract may be given in the form of pills, either alone or with other medicines. The extract is well calculated for weak stomachs that cannot bear much bark in substance. Cinchona finely powdered and quilted in the folds of a linen waistcoat, or repeatedly exhibited, in the form of a clyster, has frequently proved efficacious in obstinate agues, when every other method has failed; particularly with children, and in relaxed habits.

Cinnamon: The bark of a tree growing in the island of Ceylon, and which has been transplanted lately to various other places—sens. prop. A warm and extremely grateful aromatic and astringent—med. virt. Tonic, stimulant—mode of exhib. Powder; infusion; decoction; tincture; also employed in simple, and in a spiritous distilled water, as a vehicle, or sometimes as an adjunct, to various other medicines.

Cinquefoil: A trailing plant growing wild—part used, The root—sens. prop. Mildly astringent—med. virt. Tonic, in diarrhœas and relaxed gums—mode of exhib. In substance, half a drachm to a drachm; also in decoction, infusion, and gargles.

Cloves: The immature flowers and flower-cups of a tree growing in the East Indies—sens. prop. Smell, very fragrant; taste, extremely hot and acrid—med. virt. Stimulant, carminative—mode of exhib. Powder; oil. The former may be employed by infusion, two drachms of cloves to half a pint of boiling water, in doses of three or four spoonfuls, against flatulency, in dyspepsy, and as a vehicle to other medicines.

Clove July Flower: A plant of the cruciform class, cultivated in gardens—part used, The flowers—sens. prop. Aromatic, roughish—med. virt. Tonic—mode of exhib. The syrup formed by an infusion of the flowers, with sugar.

Cochineal: A small insect of the scarabeus kind, brought chiefly from the Spanish West Indies. Employed for the fine crimson colour which it imparts to various ingredients.

Colocynth, or Bitter Apple: The fruit of a species of gourd growing in the East—part used, The fungous medullary pulp—sens. prop. Intensely bitter, acrid, and nauseous—med. virt. An extremely irritating cathartic—mode of exhib. Infusion; powder; pill; extract.

Colt's-Foot: A perennial plant with compound flowers, growing wild—part used, The leaves and flowers—sens. prop. Mucilaginous, bitterish, and roughish—med. virt. Obtunding, Tonic—mode of exhib. Infusion; decoction: in hectic and pectoral complaints, in the form of tea.

Columba: A root brought from the island of Ceylon—sens. prop. Smell, slightly aromatic; taste, intensely bitter—med. virt. Tonic, antiseptic, stomachic; a corrector of putrid bile—mode of exhib. Powder; infusion; tincture. Employed in many instances of dyspepsia with great advantage, and to stop vomiting. The powder, in doses of ten grains to thirty, joined with equal parts of vitriolated kali, is given with success in acute bilious cases.

Contrayerva: The root of a small plant growing in South America—sens. prop. Smell, lightly aromatic; taste, roughish, bitterish, and penetrating—med. virt. Tonic, stimulant, diaphoretic—mode of exhib. Powder; infusion; decoction; employed in fevers attended with debility and putrescency.

Coral, Red: A marine earthly substance, the habitation of insects.—sens. prop. Calcareous—med. virt. Antacid—mode of exhib. Powder.

Coriander: An umbelliferous plant cultivated in gardens—part used, The seeds—sens. prop. Smell, aromatic; taste, moderately warm—med. virt. Carminative, stomachic—mode of exhib. Infusion; powder; tincture. These have the common qualities of other carminative seeds, and, when dried, are generally very agreeable. Infused along with senna, they are more powerful in correcting the odour and taste of this than any other aromatic, and are equally powerful in obviating the griping that senna is very ready to produce: hence coriander seeds are an ingredient in various purgative compositions.

Cow-itch or Cowhage: A papilionaceous plant, growing in both Indies—part used, The hairs covering the pods—sens. prop. Mechanically irritating—med. virt. Anthelmintic—mode of exhib. A tea-spoonful to a table-spoonful of the medicine, mixed with syrup or molasses, and taken in a morning fasting, occasions no uneasiness in the primæ viæ,

which are defended by mucus. The worms are said to appear with the second or third dose; and, by means of a purgative dose of the solution of vitriolated magnesia, the stools have consisted chiefly of worms.

Crab's Claws: The black tips of the claws of the common crab—sens. prop. Absorbent, calcareous—med. virt. Antacid—mode of exhib. Powder.

Crab's Eyes (so called): Stony concretions found in the head or stomach of the river craw-fish—sens. prop. Absorbent, not calcareous—med. virt. Antacid—mode of exhib. Powder.

Cuckow-pint, Arum, or Wake-Robin: A perennial plant growing wild—part used, The root—sens. prop. Extremely hot, pungent and acrid, especially when fresh—med. virt. Stimulant—mode of exhib. Dose, grains ten to twenty; also in conserve, half a drachm to a drachm, is stimulant and attenuant, and is well suited to phlegmatic habits. This root is knotty, roundish, and white. When it is collected in the spring before the leaves shoot, or in autumn after flowering, it contains a milky juice of very great acrimony. Applied to the tongue, it causes a burning heat, which lasts for many hours, and excites considerable thirst. These painful symptoms may be relieved by butter-milk or oily fluids. Rubbed between the fingers, it blisters and excoriates them; yet, notwithstanding it is a corrosive vegetable poison, its acrimony is easily destructible: by drying, it loses the greatest part of its acrimony, and by repeated washings it is also rendered perfectly mild. A tailor had lately a paralytic stroke, by which he was bereaved of the use of his right hand; he was advised to rub it frequently with the root of arum (cuckow-pint, or wake-robin), and also to apply a poultice of it to his hand. He is now a great deal better, and can make use of his hand, though not, however, so well as formerly; the Editor, therefore, has directed him to wash his hand and arm, two or three times a day, with a tepid infusion of this root mixed with flower of mustard-seed; and then to apply the following anti-paralytic embrocation: Take a pint of bruised mustard-seed, moisten it well with equal parts of spirit of rosemary and simple spirit of lavender; after the mixture has stood twenty-four hours in a very gentle heat, squeeze it by a hand press: the liquid thus obtained is an uniform mixture of the oil with the pungent part of the seed and the aromatic spirits, and is, indeed, worthy of being called—the Essence of Mustard.

Cucumber, Wild: A plant of the cucurbitaceous kind growing in gardens—part used, The fruit—sens. prop. Smell, ungrateful; taste, nauseous and bitter—med virt. Stimulant, emetic, and strongly cathartic—mode of exhib. Expressed juice, which being inspissated is called elaterium. In a dose of half a grain to two or three grains, it has proved efficacious in reducing dropsical swellings, and preparing the patient for the exhibition of tonics and corroborants; but great caution is requisite in using this medicine.

Cumin: An umbelliferous plant, cultivated in the South of Europe—part used, The seeds—sens. prop. Smell, strong and ungrateful; taste, warm and bitterish—med. virt. Stimulant, antiseptic—mode of exhib Powder; infusion; externally, as a warm poultice, or a discutien plaster.

Currant, Black: The fruit of a native shrub that grows wild in England, and is cultivated for the sake of its acid, cooling, antiseptic juice, of which a syrup and a rob are prepared, which is employed in recent catarrhs, attended with sore throat or fever.

Currant, Red: This, like the former, is cultivated for the sake of its pleasant subacid fruit: of this a jelly is formed, by boiling the juice with a sufficient quantity of sugar, which is often used as an antiseptic demulcent in sore throats, and, dissolved in water, forms a pleasant cooling drink in bilious and feverish complaints. Mr. F. S. Stuart, of Billeriacy in Essex, has informed the public, that he was brought to the verge of the grave by a consumption of the lungs, and restored to perfect health by eating three or four pints per day of ripe currants, white and red; and he mentions other persons who have been recovered from the same disease by the same means.

Dandelion: A plant with compound flowers, growing common---part used, The herb and root--sens. prop. Abounding in a milky bitterish, sub-acrid juice--med. virt. Aperient, diuretic, resolvent--mode of exhib. Expressed juice of the herb; decoction and infusion of the root. The root, with sorrel-leaves, in broths, taken daily for some months, interposing, now and then, a laxative dose of cream of tartar, has removed hardness of the liver, ascites, and gall-stones.

Dill: An umbelliferous plant growing in warm climates---part used, The seeds---sens. prop. Mildly aromatic---med. virt. Stimulant---mode of exhib. A simple distilled water, and an essential oil.

Dragon's Blood: A resin obtained from a large plum-like tree in the East Indies---sens. prop. In substance inodorous and insipid; in solution, somewhat warm and pungent---med. virt. Tonic---mode of exhib. Powder. It now gives place to a more efficacious gum-resin, called Kino.

Egg, Hen's:---part used, The yolk, white, and shell---sens. prop. Yolk, sapid and mucilaginous; white, insipid and mucilaginous. They are both unwholesome and delicate articles of food---med. virt. The yolk is often used in pharmacy, for suspending oily and resinous substances in water; the white is used to clarify liquids; the shells, freed from the membrane lining them, and finely levigated, are an absorbent. Two raw new-laid eggs, beaten up in a glass of water, taken in the morning fasting, and repeatedly given every four hours throughout the day, have proved very beneficial in obstinate jaundices occasioned by viscid bile, or gluten obstructing the biliary ducts.—The yolk of two new-laid eggs, beaten up with an ounce and a half (i. e. three table-spoonfuls) of rose-water, seasoned by three or four grains of nutmeg, and mixed with half a pint of milk, fresh from the cow, sweetened with powdered sugar-candy, or syrup of capillaire, if taken early (i. e. before rising) in a morning, is a safe palliative medicine in pulmonary consumption. The use of it should be persisted in some weeks; malt and spirituous liquors should be avoided, and, to restrain the profuse perspirations to which hectic patients are liable, one to three or four tea-spoonfuls of the following electuary may be taken in the morning, when the heats come on; at noon, and also at bed-time: Conserve of roses, two ounces, diluted vitriolic acid, three drachms; mix.

Elder; A small tree growing in hedges—part used, The flowers, berries, and bark—sens. prop. Flowers, fragrant; berries sweetish; bark, sweetish and sub-acrid—med. virt. Flowers and berries laxative—mode of exhib. Infusion of the flowers, laxative; and, boiled in oil and suet, forms a cooling emollient ointment; decoction of the bark, emetic and purgative in dropsical cases. The rob, or inspissated juice of the berries, is cooling and aperient. It is recommended in dyspepsy, and debility of the urinary passages, in doses of a drachm to half an ounce or more.

Elecampane; A large plant with compound flowers, growing wild—part used, The root—sens. prop. Aromatic, nauseous, bitter, pungent—med. virt. Stimulant, aromatic—mode of exhib. Powder; infusion; decoction.

Elemi (gum); A concrete resinous juice, obtained from a large tree growing in both Indies—sens. prop. Smell, strong and grateful; taste, slightly bitter—med. virt. Stimulant—mode of exhib. In ointments.

Elm: A tall timber tree, of common growth—part used, The inner bark—sens. prop. Mucilaginous, sub-astringent—med. virt. Tonic, aperient—mode of exhib. Decoction; the quantity of a pint to a quart a-day, prepared by boiling four ounces of the inner bark, bruised, in four pints of water to two pints, to relieve leprous and other cutaneous disorders.

Eringo Root, or Sea Holly: A prickly plant with flowers in a head, growing on the sea shore—part used. The roots—sens. prop. Slightly aromatic and bitterish—med. virt. Stimulant and diuretic—mode of exhib. Decoction. It is often employed as a conserve or sweetmeat.

Fennel, Sweet: An unbelliferous plant, growing in the warmer climates—part used, The seeds—sens. prop. Smell, aromatic; taste, warm and Sweetish—med. virt. Stimulant, diuretic—mode of exhib. Powder; infusion; and simple distilled water.

Fenugreek: the seeds are obtunding and emollient. They are employed in cataplasms, clysters, and fomentations.

Fern, powder of the Root: lightly styptic and sub-acrid; given in doses of two drachms to three, to an adult, to a child about a drachm, in a morning fasting, against the tape-worm; taking two hours afterwards one to three grains or more of calomel, according to the age and constitution of the patient, and, if necessary, a dose of vitriolated magnesia at proper intervals.

Figs: The preserved fruit of the fig tree. Aperient, obtunding, in emollient decoctions. Externally heated as warm as they can easily be borne, to promote the suppuration of a phlegmon when so situated that other cataplasms cannot be easily applied.

Fox Glove: A plant with beautiful gaping flowers, growing wild—part used, The leaves—sens. prop. Poisonous, bitterish, very nauseous—med. virt. Strongly cathartic, diuretic, emetic, and sedative—mode of exhib. Infusion; decoction; powder; tincture. In asthmatic and dropsical cases, the powder (which is the least uncertain way of exhibiting this herculean remedy) may be given in doses of a quarter or half a grain, very gradually and cautiously increased to two grains, mixed with one to two grains of aromatic powder, once in eight or twelve hours, according to the effect.

Frankincense: Stimulant, tonic. Chiefly used in plasters.

Galls: Excrescences formed on the oak-tree by insects in the warmer climates—sens. prop. Strongly astringent—med. virt. Tonic—mode of exhib. Powder; infusion; decoction. Externally applied to parts affected with hæmorrhoids, or piles, in the proportion of a drachm of powdered galls mixed with one ounce of hog's lard.

Galbanum: A gummy-resinous concrete, obtained from an umbelliferous plant growing in Ethiopia—sens. prop. Smell, fœtid; taste, bitterish, warm, and pungent—med. virt. Discutient, stimulant, antispasmodic —mode of exhib. Pill; emulsion; tincture; plaster.

Gamboge: A gummy-resinous concrete, obtained from certain East India trees—sens. prop. Taste, acrid; colour, deep yellow—med. virt. Emetic, and strongly cathartic—mode of exhib. Pill; emulsion; tincture.

Garlic: A bulbous-rooted plant, cultivated in gardens—part used, The roots—sens. prop. Smell, very strong, diffusive and ungrateful; taste, extremely acrimonious and penetrating—med. virt. Internally, stimulant, expectorant, diuretic, laxative, and sudorific; improper for persons of an inflammatory or sanguine temperament, but an excellent medicine for the aged and phlegmatic. The Editor is sorry that the limits prescribed to him will not permit him to add more in recommendation of this useful "Domestic Medicine," than that the juice of garlic dropped on cotton, and applied to the meatus or orifice of the ear, for deafness, till it excite moderate pain and heat, will increase the secretion of mucus in the organ of hearing: That garlic is eaten crude, taken in the form of pill or bolus, and in whey. It is often applied with success, in the form of cataplasms to the soles of the feet; to relieve disorders of the head or breast, and pains of the teeth.

Gentian: A perennial plant, growing in the mountainous parts of Germany—part used, The root—sens. prop. Intensely bitter—med. virt. Tonic, stomachic—mode of exhib. Infusion; tincture. The extract may be joined with the preparations of iron, and with other medicines, and taken in the form of pills. A medicine has been long famous and much employed in this country, under the title of Elixir stomachicum, or Stoughton's Elixir, in resemblance and medical effect coinciding with the compound tincture of gentian.

Ginger: The root is often taken as a carminative and stomachic prepared as a sweetmeat. This useful root is often directed in powder, being aromatic, cordial, and carminative. It is likewise an useful ingredient in infusions.

Ginseng: The root of a small plant growing in China, Tartary, and North America. It is mucilaginous with sweetness, and bitterish with some aromatic warmth—med. virt. Tonic, antispasmodic, obtunding—mode of exhib. Powder, half a drachm or more; or infusion. In cases of paralysis of the tongue, &c. it may be chewed.

Guaiacum: A large tree growing in the West Indies—part used, The wood, bark, and resin or gum—sens. prop. Smell, lightly aromatic; taste, sub-acrid—med. virt, Alterative, stimulant, sudorific—mode of exhib. The wood and bark in decoction: the gum in pill, bolus, tincture. Before the preparations of quicksilver were discovered to have a specific virtue in curing the venereal disease, guaiacum sold at an immense high price.

Hartshorn: The horns of the male red deer. Rasped and boiled in water, they yield an insipid, obtunding, nutritive jelly. An astringent decoction is prepared by boiling calcined hartshorn with gum arabic, as directed in the Appendix.

Hellebore Black: A perennial plant growing in Germany. The root is used in medicine. It is bitter, pungent, alterative, attenuant, and deobstruent; strongly purgative, and stimulant. This root was much employed by the antients in infusion and decoction. It continues to be administered in powder, tincture, and extract. The latter is employed with other ingredients (myrrh, &c.) against dropsical diseases.

Hellebore White: A perennial plant growing in Switzerland and other mountainous parts of Europe—part used, The root—sens. prop. Smell, disagreeable; taste, nauseous, bitterish, and very acrid—med. virt. Violently emetic and cathartic; sternutatory—mode of exhib. Externally, in powder and decoction.

Hemlock: An umbelliferous plant growing wild in moist shady places—part used, The leaves—sens. prop. Smell, fœtid; taste, herbaceous—med. virt. Narcotic, in large doses; alterative, sedative, diuretic, anodyne, in smaller ones—mode of exhib. Powder of the leaves; also the inspissated juice of the leaves, commonly called the extract of hemlock. This, as well as all other medicines capable of acting so powerfully on the nervous system, ought, if possible, to be given under the direction of gentlemen of the medical profession. It is safe to begin with two grains for an adult three times a-day, which has in many instances been extended to upwards of thirty grains three times in twenty-four hours. It is given alone, and often conjoined with other articles of the Materia Medica in the hooping cough; against hectic occasioned by incipient tubercles of the lungs; and in scrophulous and schirrous disorders.

Herb Mastich, Syrian, A plant with labiated flowers—part used, The leaves; they are aromatic, pungent, stimulant, and are used as an ingredient in the compound powder of asarabacca, a sternutatory or sneezing powder, commonly called Cephalic Snuff.

Hip: The fruit employed to form a conserve that is used as a vehicle for various medicines.

Honey: A vegetable juice collected from flowers by the bee. It is the basis of various medicinal compositions, and its domestic uses are too well known to need recapitulation in the narrow limits to which we are now necessarily prescribed.

Horse-radish: a plant with cruciform flowers, usually cultivated in gardens—part used, The root—sens. prop. Acrid, penetrating, with very pungent effluvia—med. virt. Stimulant, diuretic—mode of exhib. Infusion with mustard seed, against dropsical and paralytic complaints; also in the compound spirit of horse-radish. According to the late Dr. Withering, an infusion of scraped horse-radish in milk makes one of the safest and best cosmetics.

Hyssop, Hedge: A low plant with irregular flowers, grown in gardens—part used, The herb—sens. prop. Bitter, nauseous—med. virt. Diuretic, violently emetic, and cathartic—mode of exhib. Two to six or eight grains of the powdered root, beginning with a very small dose, which may be gradually increased, against dropsy and worms. It is

said to have been serviceable in those cases, given as an infusion made by adding one drachm of the powdered root to a pint of boiling water, milk, or beer. Dose, a table-spoonful three times a-day.

Jalap: The root of a plant growing in the West Indies—sens. prop. Resinous, slightly pungent—med. virt. Strongly purgative—mode of exhib. Powder; pill: extract; tincture. A cathartic better suited to cold phlegmatic, than hot, bilious, constitutions.

Ipecacuanha: The root of a plant growing in South America—sens. prop. Bitterish and sub acrid—med. virt. Emetic, sedative, sudorific—mode of exhib. Pill; powder; bolus; also infused in wine.

Isinglass: A glutinous substance, brought from Russia, prepared from the membranous parts of fishes—sens. prop. Restorative, agglutinating—mode of exhib. Boiled into a jelly with milk, to abate flour albus, diarrhœas, and other weaknesses. It is an ingredient in the court sticking-plaster.

Juniper Berry: Med. virt. Carminative, diuretic, stomachic—mode of exhib. Infusion; compound spirit; and an essential oil.

Kino: A gum-resin, from the vicinity of the river Gambia—sens. prop. Astringent, mucilaginous—med. virt. Tonic, obtunding—mode of exhib. Powder; electuary; tincture. In chronic diarrhœas and dysenteries, in hæmorrhages from the uterus, and in diseases arising from laxity of the solids.

Ladies' Smock, or Cuckoo Flower:—Part used, The flowers—sens. prop. Slightly acrid—med. virt. Antispasmodic—mode of exhib. Powder, in doses of a scruple to a drachm, three a-day, in convulsions, spasmodic asthma, and St. Vitus's dance.

Lavender: A bush plant cultivated in gardens—part used, The flowering spikes—sens. prop. Smell, fragrant; taste, warm and bitterish—med. virt. Stimulant, tonic, aromatic—mode of exhib. Infusion, simple spirit, compound spirit, essential oil.

Laudanum: A resin of a perennial shrub that grows in Syria and in the Grecian islands—med. virt. Tonic, stimulant—mode of exhib. In plasters.

Lemon: The fruit of a tree growing in warm climates—part used, The juice and rind—sens. prop. juice, a grateful acid. Rind, a very fragrant aromatic—med. virt. Juice, cooling and antiseptic; rind stimulant—mode of exhib. Juice, in drinks, with water and sugar; and combined with alkaline salts. Rind, in infusions and tincture. The syrup mixed with many medicinal preparations for bilious and inflammatory disorders.

Leopards'-Bane, German: Part used, The herb, flowers and root—sens. prop. Unpleasant smell and acrid taste—med. virt. Emetic, diuretic, diaphoretic—mode of exhib. In infusion or decoction, one drachm to three drachms, in a pint of water or ale every day, is recommended by German physicians in paralysis; also for intermittent and putrid fevers.

Linseed: The seed of the common flax—sens. prop. Unctuous, mucilaginous—med. virt. Obtunding, emollient—mode of exhib. Infusion; powder for cataplasms. A bland oil is expressed from them of a disagreeable flavour.

Liquorice Root: A rich durable sweet—med. virt. Obtunding, and use-

ful in abating thirst—mode of exhib. Powder, infusion, decoction. Extract, either in infusion or slowly dissolved in the mouth.

Logwood: A wood of a tree growing in the bay of Honduras—sens. prop. Sweetish, astringent—med. virt. Tonic—mode of exhib. Decoction, infusion, extract; employed against diarrhœas and dysenteries.

Mace: A membrane covering the shell of that fruit, the kernel of which is the nutmeg—med. virt. Tonic—mode of exhib. Expressed oil; an ingredient in the laudanum, or stomach-plaster.

Madder Root—sens. prop. Smell, ungrateful: taste, bitterish and astringent—med. virt. Aperient, attenuant, diuretic, emmenagogue—mode of exhib. Powder, decoction; in jaundice, obstructed menses, &c.

Mallow, leaves, flowers, and root: A perennial plant, growing wild—sens. prop. mucilaginous. The roots sweetish—med. virt. Obtunding, emollient—mode of exhib. decoction, cataplasm.

Manna: A concrete juice exuding from a kind of ash, chiefly in Calabria and Sicily—sens. prop. Sweet, unctuous—med. virt. Aperient, obtunding—mode of exhib. Solution in watery liquors; electuary; syrup.

Marjoram, sweet and wild: This herb is an ingredient in the compound powder of asarabacca, a powder that is equally efficacious with the best herb snuff.

Marsh-Mallow: A perennial plant, growing in marshes—part used, The leaves and root—med. virt. Obtunding—mode of exhib. Powder, infusion, and in decoction of barley with a little liquorice root, against catarrhs and nephritic complaints. The root an ingredient in the compound powder of tragacanth, in an elegant syrup, and a useful ointment.

Mastich: A concrete resin obtained from the Lentisk-tree in the isle of Chio—sens. prop. Smell, resinous and agreeable; taste, bitterish and lightly warm—med. virt. Tonic, antiseptic; chewed, it disguises a fœtid breath, and strengthens the gums; it is also occasionally used with fragrant substances by way of fumigation.

Meadow-Saffron: A bulbous-rooted plant, growing in wet meadows—part used. The root—sens. prop. Smell, pungent; taste, acrid—med. virt. Strongly cathartic and diuretic—mode of exhib. An active oxymel is prepared by infusing this root in vinegar, with honey. The dose of this oxymel is a tea-spoonful or two in a cup of tea, or of distilled water, as a remedy for the dropsy. If given in a greater dose at first, or if it is too rapidly repeated, it will occasion bloody stools and other morbid symptoms.

Mezereon: A small shrub cultivated in gardens—part used, The root—sens. prop. Very durably hot and acrimonious—med. virt. Stimulant, and resolvent of venereal nodes—mode of exhib. Decoction.

Millepedes, or Wood-lice: A species of winged insects, found chiefly among decayed wood—sens. prop. Smell, disagreeable; taste, saltish and unpleasant—med. virt. Aperient, and diuretic—mode of exhib. Swallowed whole; powder; expressed juice. They are prescribed, both fresh and dry, in powder, from a scruple to a drachm, in obstructions of the liver and suppression of urine. We have a mean opinion of their virtues.

Mint, Pepper, or Peppermint: A plant cultivated in gardens—part

used, The leaves—sens. prop. Smell, strong and diffusive; taste, very penetrating, with a sense of coolness—med. virt. Stimulant, carminative, antispasmodic—mode of exhib. Infusion, distilled water, spirit, and essential oil. These are principally used as a domestic remedy for flatulent colic. The essential oil is often given in doses of a few drops on sugar, in cramps of the stomach; but if that organ be in a state of inflammation, it may do much mischief. What is called the Essence of Peppermint is the rectified oil dissolved in spirits of wine.

Mint, or Spear-Mint: A plant cultivated in gardens—part used, The leaves—sens. prop. Smell, aromatic; taste, bitterish, roughish, moderately warm and aromatic—med. virt. Tonic, stomachic—mode of exhib. Infusion and a distilled water: also a spirit, and an essential oil.

Mulberry: Of this well-known cooling antiseptic fruit a syrup is prepared, to sweeten diluting liquids in bilious and inflammatory disorders.

Musk: A grumous substance found in a bag situated under the belly of an animal of the deer kind, in Thibet and Tartary—sens. prop. Smell, fragrant, extremely powerful, and diffusive. Taste, bitterish, rather acrid—med. virt. Stimulant, antispasmodic—mode of exhib. Bolus, watery mixture.

Mustard: The seeds are stimulant and very pungent—mode of exhib. In substance: a table-spoonful, with a cupful of an infusion of broom-tops, is laxative and diuretic. Infused in wine or water with fresh shaved horse-radish root, it is useful in scorbutic and paralytic disorders. Infused in water, and taken in large doses, it proves emetic. The powder is frequently made into a paste or soft poultice with vinegar and bread-crumb, and applied to benumbed limbs; to pained parts in chronic rheumatism; or to the soles of the feet in the low state of fevers.

Myrrh: A gummy-resinous concrete, brought from the East Indies—sens. prop. Smell, strong, and not ungrateful; taste, very bitter and pungent—med. virt. Tonic, heating, stimulant, antiseptic—mode of exhib. Powder, pill, watery emulsion, spirituous tincture.

Nettle, common stinging: The herb of this well known plant is herbaceous, sub-saline—med. virt. Aperient, diuretic, and cooling—mode of exhib. Decoction or infusion. The expressed juice, in doses from two to three ounces, is useful in inward bleedings and nephritic complaints. Externally, they are employed to whip palsied limbs, which they have sometimes restored to sensibility and motion.

Nutmegs: The kernel of the root of an East Indian tree—sens. prop. Smell, aromatic; taste, moderately warm, and unctuous—med. virt. Stimulant—mode of exhib. Powder, spirituous distilled water, and an essential oil.

Oak, the bark: Astringent—med. virt. Tonic—mode of exhib. Decoction, chiefly for external application: Slight intermittents, however, have been cured by giving the powder of this bark in doses of 20 to 30 grains every three hours, with a cupful of the infusion of camomile flowers. It may be given in jelly, port wine, or marmalade.

Olibanum: A gummy resin obtained from a tree growing in Arabia—sens. prop. Smell, strong, not agreeable; taste, bitterish, rather acrid—mode of exhib. Powder, pill, electuary, tincture, emulsion.

Olive oil, is procured by expression from the fruit of a tree growing in the warmer climates---sens. prop. Inodorous, insipid, unctuous---med. virt. Obtunding, emollient---mode of exhib. Internally, by itself or united to watery liquids by mucilaginous matters or volatile alkalies. Externally, in liniments, ointments, and plasters.

Opium: The concrete gummy-resinous juice of the white poppy, collected in the warm countries of the East---sens. prop. Smell, disagreeable; taste, bitter, somewhat acrid---med. virt. Narcotic in large doses, sedative in smaller---mode of exhib. Pill, tincture, solution.

Opoponax, is a concrete gummy-resinous juice of an umbelliferous plant which grows in the Levant and the East Indies. It is attenuant and deobstruent.

Orange, Seville: A well-known fruit growing in Spain and Portugal---part used, The rind and pulp---sens. prop. Rind, bitter and aromatic; pulp, acid---med. virt. Rind, tonic; pulp, cooling and antiseptic---mode of exhib. Infusion of the rind; juice of the pulp in febrifuge drinks. An elegant stomachic conserve, tincture, and syrup, are formed of the rind, useful to cold phlegmatic habits.

Orris Root: An agreeable perfume, of little use in medicine.

Pareira Brava: The root of an American convolvulus, brought from the Brazils---sens. prop. It has no smell; the taste is a little bitterish, blended with a sweetness like that of liquorice---med. virt. Useful in suppressions of urine, in ulcers of the kidneys and bladder, in humoral asthma, some species of jaundice, and in nephritic disorders---mode of exhib. Half an ounce of the root, boiled in three pints of water to one, sweetened with honey; a cupful to be taken every three or four hours: in substance, powdered, fifteen to thirty grains twice or thrice a-day.

Parsley: An umbelliferous plant, cultivated in gardens---part used, The seed, and roots---sens. prop. Roots, sweet, and lightly warm; seeds, aromatic and bitter---med. virt. Stimulant, mildly diuretic---mode of exhib. The root in decoction, against jaundice, gravel, and suppression of urine.

Pellitory of Spain: The root is used as a masticatory (i. e. chewed) to promote the evacuation of viscid humours from the head and neighbouring parts; to relieve the tooth-ach, some kinds of pain of the head, and lethargic complaints. An infusion of five to ten grains of this root in wine may be employed as a gargle in debility, or paralysis of the tongue.

Pellitory of the Wall: This is a small plant growing upon old walls, of an herbaceous sub saline taste, without any smell---med. virt. The herb diuretic, emollient; externally, discutient---mode of exhib. In infusion, decoction, and the expressed juice against gravel and stone.

Pennyroyal: A plant cultivated in gardens. The leaves smell strong, not agreeable; taste, warm and pungent---med. virt. Stimulant, aromatic---mode of exhib. In infusion, as tea, against uterine obstructions. A water is distilled from it, and an essential oil.

Pepper, black: The fruit of a trailing shrub growing in the East Indies, of a heating and stimulating quality.

Pimento: The dry berry of a tree growing in Jamaica---sens. prop. Smell, grateful and aromatic; taste, moderately warm---med. virt.

Stimulant---mode of exhib. A water distilled from it, and an essential oil: The latter sinks in water; the former serves most of the purposes of waters drawn from more costly spices.

Pink, Carolina: This root is celebrated for the expulsion of worms from the alimentary canal; it sometimes acts unpleasantly on the nervous system. Some order it in doses of ten or fifteen grains, while others advise it in doses of a drachm, alleging that bad effects more readily happen from small doses, as the large dose generally purges or pukes; hence we do not recommend this medicine in domestic practice.

Pitch, Burgundy: The resin exuding from the common fir-tree, softened in warm water, and strained---med. virt. Stimulant---mode of exhib. In plasters and ointments.

Pomegranate Tree: A prickly tree or shrub growing in the south of Europe---part used, The flowers and rind of the fruit---sens. prop. Flowers and rind, astringent; fruit, tart and roughish---med. virt. Tonic, cooling---mode of exhib. Juice of the fruit; infusion and decoction of the flowers and rind. Against prolapsed rectum and uterus. Sydenham directs the application of a fomentation to be made of an ounce of the rind of pomegranate bruised, with two pints of decoction of oak-bark and half a pint of red wine. In colliquative diarrhœas, accompanying hectic fever, Dr. Mead directed the following astringent and nutritive decoction: Take of dried red rose leaves, balustines, pomegranate rind, and cinnamon, of each one drachm; boil in a pint of cow's milk, adding little by little, during the boiling, a pint of water: Keep it on the fire till the whole is reduced to one pint; then strain off, and sweeten with a little sugar. To be taken in repeated draughts in the course of a-day.

Poppy, Red, or Corn Rose: The flowers are very common in corn-fields; they are weakly sedative; a syrup is prepared from them: Its virtues are considerable.

Poppy, White: A plant cultivated in gardens. The heads or seed-vessels afford a bitter milky juice, which, in a concrete form, is opium---med. virt. Anodyne, sedative. Of the expressed decoction, by the addition of sugar, an useful syrup is formed. Of the decoction, strongly expressed and evaporated, an extract is formed, more pure than the opium that is imported.

Prunes, Common, or French Prunes: The fruit of a kind of garden plum-tree growing in France---med. virt. Laxative, cooling; eaten crude or stewed.

Quassia-Root: The woody root of a tree growing in Surinam---sens. prop. Intensely bitter---med. virt. Tonic, stomachic, a corrector of putrid bile---mode of exhib. Infusion; extract. It is much used in this country as a succedaneum for hops, to give bitterness to malt liquor, though it deservedly subjects those brewers who employ it to a very heavy penalty. Strong bitters are very properly exhibited as medicines in intermittent and bilious fevers, in some stomachic complaints, in cachexy, dropsy, and gout; but there is sufficient evidence to prove, that the long-continued or habitual use of this class of remedies has been productive of incalculable mischief.

Quince: The fruit of a tree cultivated in gardens. The apple of the

quince yields an austere acid juice: A pleasant astringent marmalade is prepared from it, which is deemed a preservative against sea-scurvy, and covers well the bitter taste of the cinchona bark, which is disagreeable to delicate patients.

Raisins: Grapes dried by the heat of the sun: they are imported from Spain and the Levant. This fruit is sweet, aperient, and obtunding: It is eaten crude, and is an ingredient in pectoral decoctions.

Raspberry: The fruit, acid and sweet: Cooling, antiseptic.

Rattlesnake-Root, or Seneka, is a perennial plant which grows wild in Virginia and Pennsylvania---sens. prop. Acid, hot, pungent. It has no smell---med. virt. Diuretic, expectorant, stimulant. The Senegaro Indians are said to prevent the fatal effects of the bite of the rattle snake by giving it internally, and by applying it externally to the wound. The usual dose of seneka root is from one to two scruples of the powder; or two or three table-spoonfuls of a decoction prepared by boiling one ounce of the root in a pint and a half of water till it is reduced to a pint. This is prescribed in pleuritic, rheumatic, and dropsical affections.

Rhubarb: The root of this dock-like plant tastes bitterish, somewhat acrid, and astringent---med. virt. Tonic, mildly cathartic—mode of exhib. Powder; infusion; tincture.

Rose, Damask: The flowers of a shrub cultivated in gardens---sens. prop. Very fragrant, bitterish---med. virt. Laxative, odoriferous. The shops keep a syrup, a honey, and a simple distilled water, of roses.

Rose, Red: The flowers of a shrub cultivated in gardens—med. virt. Tonic. From these a honey, syrup, and conserve, are prepared.

Rose, Dog: The dog rose is a shrub growing in hedges. The fruit is cooling, sweet-acid, and the basis of what is called the conserve of hips.

Rosemary: a shrubby plant, with labiated flowers, growing in gardens--- part used, The flowering tops---sens. prop. Smell, grateful; taste, warm and pungent---med. virt. Stimulant---mode of exhib. Infusion as tea against violent head-achs and other nervous complaints. An essential oil, and the spirit of rosemary, are distilled from the tops, which are the principal ingredient in what has generally been called Hungary water.

Rosin, Yellow: Baked turpentine. It is used in forming various ointments and plasters.

Rue: A shrubby plant cultivated in gardens—part used, The leaves— sens. prop. Smell, strong and ungrateful; taste, penetrating and bitterish—med. virt. Antispasmodic, stimulant, anthelmintic—mode of exhib. Powder; infusion as tea, attenuant, deobstruent, for the impeded discharges of hysterical females. The extract may be given in doses of five to twenty grains in the form of pills. The juice or infusion may be exhibited in a lavement against worms.

Saffron: The filaments of the pistil of a bulbous-rooted plant cultivated in the fields—sens. prop. Smell, aromatic, very diffusive; taste, warm and bitterish; colour, high orange—med. virt. Heating, cordial, stimulant. An elegant syrup is prepared from saffron

and it is an ingredient in several medicinal preparations, not so much on account of any singular virtues it is now supposed to possess, as for the elegant colour it imparts. Externally, saffron is often mixed with emollient and resolvent cataplasms.

Sagapenum: A gummy-resinous juice of uncertain origin, the product of Egypt—sens. prop. Smell, strong and fœtid—med. virt. It is a stimulant aperient—mode of exhib. Pill; emulsion: Rarely employed.

Sage: The leaves of a perennial plant growing in our gardens. It is aromatic and bitterish—med. virt. Tonic, sudorific. Watery infusions of the leaves mingled with a little lemon or orange juice, proves an useful diluent drink in febrile disorders.

Saint John's-Wort: The flowers are the product of a perennial plant that was formerly famous in medical practice, and which grows wild in woods and uncultivated places in Britain. Its taste is rough and bitterish, and its smell disagreeable. It is slightly tonic, and sometimes the infusion is employed in hysterical cases.

Sarsaparilla: A climbing plant growing in the Spanish West Indies. Part used, The root and its bark—sens. prop. Smell, fragrant; taste, sub-astringent and lightly warm—med. virt. Tonic, obtunding—mode of exhib. Powder; decoction.

Sassafras: A large tree growing in the warmer parts of America. The smell of this wood is fragrant; taste, lightly warm. It is employed in stimulating and sudorific decoctions for scorbutic and venereal impurities.

Savin: The leaves of an ever green prickly shrub, growing in gardens—sens. prop. Smell, strong and disagreeable; taste, hot, acrid, bitterish—med. virt. Stimulant, diuretic. A scruple to half a drachm of the powdered leaves has been given twice a-day with success to athletic women in cases of obstructed menstruation. The fresh leaves of savin may be given in the form of a conserve, or infused as tea, against worms and gouty affections, or the extract in the form of pills may be given in doses from ten to thirty grains, or twenty to thirty drops of the compound tincture in a cupful of pennyroyal-tea. In plethoric habits, venesection should precede the use of savin. Externally, the leaves are applied in the form of powder, or strong infusion, to warts, carious bones, old ulcers, &c.

Scammony: The gummy-resinous juice of a plant growing in Syria—sens. prop. Smell, weak and unpleasant; taste, bitterish and sub-acrid—med. virt. Strongly cathartic—mode of exhib. Powder; electuary. It is not proper for infants, pregnant women, or persons of a weakly frame, nor in hot diseases and constitutions.

Scordium was formerly much prescribed as a detergent, &c., but is at present seldom used.

Scurvy-Grass: Garden scurvy-grass is a plant of the cruciform siliquous class, growing in maritime situations, and cultivated in gardens—part used, The herb—sens. prop. Acrid and saline—med. virt. Aperient, stimulant, antiscorbutic. It is eaten crude, and the juice, which may be taken in doses of an ounce or two, is used with good effect, joined with the juices (a table-spoonful or two of each) of brook lime, water cresses, and Seville oranges. The fresh leaves of scurvy-grass, beaten into a conserve with thrice their weight of fine sugar, may be kept in

a close vessel, without any diminution of their virtue, for years: It may be taken in doses of two drachms to half an ounce twice or thrice a-day.

Senna: A pod-bearing papilionaceous plant, growing in Egypt and the East—part used, The leaves—sens. prop. Smell, ungrateful; taste, nauseous and bitterish—med. virt. Purgative—mode of exhib. Extract; powder; infusion; tincture. To cover the taste of senna, coriander seeds are employed; but to prevent its griping, the warmer aromatics, such as cardamom seeds, or ginger, are more effectual. The dose of the extract is from half a drachm to two drachms; it may be given in the form of pills, but the extract is a weak cathartic, and occasions more griping pain in the bowels, unless joined with an aromatic, than the tincture drawn from the leaves, probably because that is mingled with carminatives.

Simarouba: A tree growing in Guinea. The bark which is simply bitter, is the part used. It is a tonic that has been much celebrated in obstinate diarrhœa, dysentery, indigestion, and intermittent fevers. It is given in infusion or decoction. Two drachms of the bark boiled in two pints of water to one pint, may be drank in cupfuls in the course of a day. When this bark cannot be had, an infusion of camomile flowers, with or without four or five drops of the tincture of opium in each dose, may be employed for the same intentions.

Sloes: The fruit of the common black thorn which grows in hedges, have a rough, austere, astringent taste. A conserve of sloes is kept in the shops; it is a cooling astringent in doses of a drachm or two: dissolved in the decoction of cinchona bark, it makes an efficacious gargle for relaxed tonsils. The powdered bark of this bush cures agues; and a handful of the flowers infused in whey is a pleasant laxative.

Snake-Root, Virginia: A plant growing in North America—part used, The root—sens. prop. Smell, aromatic; taste, warm and bitterish—med. virt. Stimulant, tonic, antiseptic, diaphoretic—mode of exhib. Powder; infusion; tincture. Snake-root was at first recommended as a medicine of extraordinary power in counteracting the poisonous effects of the bites of serpents. Both this and contrayerva are found very useful medicines in typhus fever and in putrid diseases, also in eruptive fevers, to determine the disease to the skin and promote the eruptive process. In cases of gangrene, and in obstinate intermittent fevers, the snake-root is an excellent auxiliary to the cinchona bark. Externally, it is used as a gargle in the putrid sore throat.

Sorrel, Common: An herbaceous plant, growing wild, and cultivated in gardens. The acidulous herb is cooling, aperient, antiscorbutic. It is eaten crude, and a decoction of it in whey is refrigerant in febrile heats, and cases of bilious and scorbutic acrimony.

Sorrel, Wood: Wood-sorrel is a small perennial plant, growing wild. The leaves are gratefully acid, cooling and antiseptic; they are eaten crude: sometimes the expressed juice is taken as a tonic and antiscorbutic. The London College of Physicians order a conserve of wood-sorrel to be kept in the apothecaries' shops, which is given to quench thirst, and to cool the mouth, fauces, and primæ viæ, in bilious remitting fevers.

Southernwood: A shrubby compound-flowered plant, cultivated in

gardens—part used, The leaves—sens. prop. Smell, fragrant; taste, warm and bitterish—med. virt. Tonic, antiseptic, aromatic, volatile. It is now rarely used, unless in the way of decoction for discutient and antiseptic fomentations, in which intention it appears to be of no inconsiderable efficacy, especially when joined with camomile flowers, wormwood, &c. as in the Appendix.

Spermaceti: Is an unctuous flaky substance, of a white colour and a butyraceous taste, without any remarkable smell; it is prepared from the fat of the brain of a species of whale—sens. prop. Bland, insipid—med. virt. Obtunding, emollient—mode of exhib. In substance; combined with watery liquors, by means of almonds, gum, or yolk of egg; in pectoral mixtures, or emulsions. Externally, as it readily dissolves in oils and unctuous substances, an elegant cerate and an ointment are formed, which are often used for healing blisters, burns, excoriations of the skin, &c.

Sponge: A substance adhering to rocks in the sea; the habitation of certain marine insects—sens. prop. Soft, light, porous, elastic; affording a marine soda-like salt, when boiled, or calcined—med. virt. Internally, stimulant and resolvent; externally, proper for dilating sinuses by its swelling, and for stopping hæmorrhages by its adhesion. Burned in a close vessel till it becomes black and friable, this is used in powder, with some suitable syrup or conserve into an electuary; or it may be formed into troches. Burnt sponge may be given in doses of a scruple or upwards against scrophulous indurations and cutaneous foulnesses.

Squill, or Sea-onion: A bulbous-rooted plant growing on the sandy shores of Spain, Portugal, and Syria—part used, The root—sens. prop. Nearly inodorous. Taste, nauseous, bitter and acrid—med. virt. Stimulant, emetic, and diuretic—mode of exhib. The dry root powdered, or in the form of pills, may be given as an alterative; and to promote expectoration, from one, three, to six grains. From ten grains to a scruple as an emetic, in pituitous asthma. The London College of Physicians direct the apothecaries under their jurisdiction to keep a conserve of squills, which may be taken in doses of half a drachm to a drachm—Honey of squills: dose half a drachm to two drachms—Squill pills; dose ten grains to thirty.—Oxymel of squills: dose half a drachm to two drachms—Tincture of squills: dose fifteen, thirty, to sixty drops. In doses of one drachm and a half to three or four drachms, it proves emetic.—Vinegar of squills: in the dose of twelve drops to thirty or sixty; alterative, cooling, expectorant. Sometimes two drachms, but more frequently half an ounce to an ounce, of that preparation acts as an emetic.

Starch is prepared from wheat, in which it forms an important alimentary substance. Its demulcent property occasions it to be formed into an officinal lozenge, which may be taken at discretion for allaying the tickling in the throat which provokes coughing; and a mucilage is prepared from starch that often produces excellent effects both taken the mouth and injected as an enema, in diarrhœa and dysenteries induced by irritation of the intestines.

Staves-acre: The seed is imported from Virginia and the southern parts of Europe. Smell, fœtid. Taste, acrid and nauseous. They are

poisonous and escharotic. They are used in ointments, or aqueous infusion for external use against the itch, fungous ulcers, &c.

Storax: A resinous substance, mixed with much woody matter, procured from a tree growing in Syria and other eastern countries—sens. prop. Smell, fragrant; taste, mildly pungent—med. virt. Tonic, and nearly similar to that of Benjamin.

Tamarind: The pod of a large tree growing in the East and West Indies —part used, The pulp about the pods—sens. prop. Mildly acid—med. virt. Cooling, laxative—mode of exhib. Eaten preserved with sugar, decoction, infusion, to quench thirst, and allay immoderate heat in burning fevers, bilious diarrhœas, and inflammations of the stomach, liver, and intestines. When the pulp of the tamarind is exhibited merely as a laxative, it may be of use to join it with manna. Three drachms of the former, and two of the latter, are usually sufficient to open the body; but to operate moderately as a cathartic, twice or three times as much of both articles are required.

Tansy: This plant grows wild by road-sides and the borders of fields. It is frequently cultivated in gardens both for culinary and medicinal uses—part used, The leaves and flowers—sens. prop. Smell, strong and aromatic; taste, bitter—med. virt. Tonic, stomachic, anthelmintic, and emmenagogue—mode of exhib. Powder, half a drachm to a drachm for a dose against flatulency and worms. From two pugils to a handful of the leaves infused in wine, promotes the menses; but they are more commonly taken in infusion, and drank as tea: Administered in this way, it is said to be a preventive of the return of the gout.

Tar: A thick resinous fluid, melted out of old fir and pine trees—sens. prop. Empyreumatic, bitter, pungent—med. virt. Stimulant, diuretic —mode of exhib. In pills, also in infusion called Tar Water, inserted in the Appendix. Externally, tar is employed as an ointment in scald-heads, and some cutaneous diseases.

Tar, Fossil, or Barbadoes Tar: A kind of fluid bitumen found in the West Indies—sens. prop. Smell, disagreeable; taste, pungent—med. virt. Stimulant, sudorific, pectoral—mode of exhib. Chiefly externally, in liniments, as a discutient, and for preventing paralytic disorders.

Thistle, Blessed: A compound-flowered plant, cultivated in gardens—part used, The leaves—sens. prop. Simply bitter—med. virt. Tonic—mode of exhib. A slight infusion of the leaves is taken with good effect in loss of appetite, where the stomach was injured by irregularities. A stronger infusion, if drank freely, and the patient kept warm, occasions a plentiful sweat, and promotes the secretions in general. The decoction is nauseous, and sometimes used to provoke vomiting. The seeds of this plant are also considerably bitter; in powder from a scruple to a drachm: They are sometimes formed into an emulsion, and used with the same intention as the leaves.

Tobacco: An annual plant, cultivated in various of the warmer climates —part used, The leaves—sens. prop. Smell, strong and ungrateful; taste, very acrid and nauseous—med. virt. Emetic, purgative, sternutatory, narcotic—mode of exhib. Infusion, and fume, chiefly injected by way of clyster. Tobacco, when it is either chewed or smoked, causes an increased flow of saliva, and sometimes relieves the tooth-ach:

reduced into powder, it proves an excellent errhine, when snuffed up the nostrils. If an ounce of the dried leaves of tobacco be infused for seven days in a pint of Lisbon wine, twenty to sixty drops of the strained liquor may be given in a cupful of broom-tea, as a diuretic in cases of dropsy and dysuria. A watery infusion is applied externally for the cure of itchy and other cutaneous diseases. The decoction is effectual in curing the mange in dogs; care, however, must be taken that it be not too strong; nor should it then be applied too profusely to glandular parts, especially to the belly, or it may cause the death of the animal by vomiting. The smoke is injected into the anus by means of bellows formed for that purpose. By acting as a stimulus to the rectum, it sometimes revives the vital powers in cases of apparent death by drowning or suffocation, and in evacuating the intestines in cases of obstinate constipation. One drachm of tobacco infused in a pint of water, and administered by table-spoonfuls, is strongly diuretic.

Tormentil, or Septfoil: A small perennial plant growing wild—part used, The root—sens. prop. Simply astringent—med. virt. Tonic—mode of exhib. Powder, decoction. The dose of the former is ten grains to a drachm, in loosenesses, dysenteric hæmorrhages, &c. but these fluxes are not to be stopped too hastily. A decoction may be prepared by boiling one ounce and a half of the root in three pints of water to two; add, towards the end of the boiling, a drachm of cinnamon: of the strained liquor, sweetened with refined sugar or conserve of roses, three or four table-spoonfuls may be taken three to five times a-day.

Tragacanth Gum, is the produce of a very thorny shrub which grows in the island of Candia, and other places in the Levant. It is without taste or smell, and much more glutinous than gum arabic. On account of its mucilaginous quality, gum tragacanth is employed as an ingredient in forming pectoral troches; and the compound powder of tragacanth is of service in catarrhal defluxions and diarrhœas, by sheathing the throat, stomach, and intestines, against acrimonious humours. The dose is a scruple to two drachms.

Turmeric: A perennial plant cultivated in gardens in the East Indies—part used, The root—sens. prop. Smell, lightly aromatic; taste, moderately warm and bitter; colour, of a deep yellow—med. virt. Aperient, diuretic—mode of exhib. Powder, decoction, infusion. It has been celebrated in diseases of the liver, jaundice, and dropsy. It is a valuable dye-stuff, but is now little regarded in medical practice.

Turpentine Common, is the native resinous juice of various trees, particularly of the pine and fir kind. Chio, or Cyprus Turpentine, is procured from a berry-bearing tree or shrub growing in the Levant—sens. prop. Smell, disagreeable in the common, fragrant in the Chio. Taste of both is hot, pungent, and bitter—med. virt. Stimulant, tonic, diuretic—mode of exhib. In pills, or bolus, from a scruple to a drachm and a half. The common is rarely given internally. Chio turpentine may be given in a fluid state blended with watery liquors by yolk of egg or mucilage. The rectified oil is extremely powerful, stimulating, detergent, diuretic, and sudorific, requiring the utmost caution in its exhibition: blended with honey, it may be given to adults in doses of six, and, gradually increased to twelve drops. Ex

ternally, oil of turpentine is with some practitioners a favourite application in cases of burns and scalds. Turpentine is an ingredient in ointments and plasters.

Valerian, Wild: A perennial plant with aggregated flowers, growing both in dry and moist situations; in the former it is the most powerful as a medicine—part used, The root—sens. prop. Smell, strong and ungrateful; taste, warm, bitterish, and sub-acrid—med. virt. Tonic, anthelmintic, antispasmodic—mode of exhib. Powder, infusion, tincture. The powder (which has been highly recommended also for dimness of sight) may be given in doses of a scruple to two drachms: an infusion, as tea, with one or two drachms, may be taken, with the addition of a little mace, which conceals the unpleasant flavour of valerian.

Uva Ursi, or Bear-Berries: An ever-green trailing plant, growing on high mountains—part used, The leaves—sens. prop. Bitterish, and sub-astringent—med. virt. Tonic, anti-nephritic—mode of exhib. Powder. In calculus, and most disorders of the urinary passages. We have already noticed (p. 105) its successful exhibition in some cases of incipient consumption.

Walnut: The unripe fruit of this well-known tree is acrid, bitterish, and styptic to the taste. Smell, not disagreeable—med. virt. Opening and vermifuge. To expel worms, two drachms of the inspissated juice of walnuts may be dissolved in half an ounce of cinnamon-water; of this solution, twenty, thirty, forty to fifty drops may be exhibited, two or three times a-day for a week, or more, giving every fourth morning a purging dose of vitriolated magnesia.

Water-Cress: The leaves of this plant of the cruciform class, growing common in wet situations, have a pungent taste and penetrating smell: They are stimulant and antiseptic when eaten crude, or the expressed juice may be taken in doses of half an ounce to two ounces.

Wolf's Bane Blue: Monk's hood, or Aconite: It is a perennial plant found in the Alpine forests and other mountainous countries in Germany, and cultivated in our gardens—part used, The leaves—sens. prop. Acrid, ungrateful—med. virt. Narcotic, and violently evacuant in a large dose; sedative, diuretic, stimulant, sudorific. One to two grains of the dried leaves in powder are given in glandular swellings, venereal nodes, gouty and rheumatic pains, intermittent fevers, convulsive disorders, &c. Under the direction of a skilful physician, the dose may be very gradually increased to six grains. The deleterious effects of this plant, when improperly exhibited, act violently on the nervous system. It occasions giddiness, convulsions, violent purging both upwards and downwards, fainting, cold sweats, and even death itself. The ancients considered the aconitum (i. e. Wolf's Bane) as the most destructive of vegetable productions; therefore we trust that no modern Domestic Practitioner will presume to exhibit this powerful and virulent medicine.

Wormseed: Small light seeds, the produce of a species of wormwood. They are brought from the Levant—sens. prop. Smell, strong and ungrateful; taste, very bitter and sub-acrid—med. virt. Anthelmintic—mode of exhib. In substance. To adults the dose is from a drachm to a drachm and a half twice a-day: Young patients may have five grains to a scruple.

Wormwood, Common: A compound-flowered plant growing wild and cultivated in gardens—part used, The leaves and flowering tops—sens. prop. Smell, strong and ungrateful; taste, extremely bitter, nauseous—med. virt. Tonic, stimulant, antispasmodic, antiseptic, anthelmintic—mode of exhib. Infusion as a strengthening bitter, to cure agues and in worm cases. Wormwood was formerly much used as a bitter against weakness of the stomach and dyspeptic complaints in medicated wines and ales. A tincture of the flowers of this plant is inserted in the Appendix. The juice may be exhibited in doses of one to four table-spoonfuls; i. e. half an ounce to two ounces. Externally, wormwood is employed in warm, discutient, and antiseptic fomentations.

Wormwood, Sea: A species of wormwood growing in salt marshes and maritime situations—part used, The leaves and flowering tops—sens. prop. Smell and taste more agreeable, but weaker than the preceding—med. virt. Tonic, antiseptic—mode of exhib. Infusion. Warm water extracts a stronger impregnation of these bitters than cold; but the latter, if it stand but a few hours, is most agreeable to the palate and stomach. The conserve of sea-wormwood, as a mild bitter and strengthener of the stomach, is given in doses of two drachms to half an ounce.

Zedoary: A root imported from the East Indies—sens. prop. Smell, aromatic; taste, warm and bitterish—med. virt. Tonic, carminative, stimulant, stomachic—mode of exhib. Powder, from ten grains to half a drachm; or an aqueous infusion, as tea, in cases of want of appetite unattended with loathing of food, and spasmodic colic.

A LIST OF SIMPLES.

AND OF SUCH

Medicinal Preparations,

AS OUGHT TO BE KEPT IN READINESS FOR PRIVATE PRACTICE OR FAMILY USE.

ACID, muriatic
nitrous
vitriolic
vinegar
of squills
Ether, vitriolic
Agaric
Antimony, crude
cinnabar of
precipated sulphur of
tartarised
Arrow-root
Balsam Capivi
of Peru
of Tolu
Bark, cascarilla
cinnamon
cinchona
canella alba
mezereon
Borax
Calamine stone, levigated
Castor, Russian
Caustic, common
lunar, or nitrated quicksilver
Earth Fuller's
Armenian bole
French ditto
Extract of camomile
of catechu
of cinchona
of coloquintida, compound
of gentian
of liquorice
of opium
of white poppy
Flowers of camomile
of colt's foot
of elder
Flowers of rosemary
of damask roses
of red roses
Fruits, almonds
cassia fistula
lemons
Curacoa oranges
figs, dried
French prunes
Jamaica pepper
Juniper berries
nutmegs
tamarinds
Gum, aloes
ammoniac, in tears
arabic
asafœtida
camphor
galbanum
gamboge
guaiacum
kino
myrrh
opium
Hartshorn, calcined
shavings of
Herbs, lesser centaury
peppermint
spearmint
pennyroyal
savin
trefoil
uva ursi
wormwood
Iceland liver-wort
Iron filings
rust of, prepared
Juice, inspissated of hemlock
of black currants
of elder

Juice of lemon
Kali, prepared
acetated
sulphurated
tartarised
vitriolated
Lead, acetated ceruse
water of acetated litharge, formerly called extract of lead
compound water of acetated litharge
Lemon-peel
Mace
Magnesia alba
Manna
Mercury, see Quicksilver
Mistletoe of the oak
Musk
Oil, essential of amber
of anise
of cinnamon
of juniper
of lemon-peel
of peppermint
expressed of almonds
of linseed
of olives, or Florence oil
of palm
of turpentine
Orange-peel
Oyster-shells, prepared
Poppy-heads
Quicksilver, crude
calcinated
with sulphur (commonly called Ethiop's mineral)
calomel
muriated (commonly called corrosive sublimate) red
nitrated (commonly called red precipitate) white calx (commonly called white precipitate)
Resins, benzoin
flowers of
Burgundy pitch
dragon's blood
frankincense
liquid storax
white or rosin
scammony
Roots, bistort
calamus aromaticus
Roots, contrayerva
garlic
gentian
ginger
hellebore, black and white
jalap
ipecacuanha
lily, white
liquorice
marsh-mallows
mezereon
rhubarb
sarsaparilla
seneka
squills
tormentil
turmeric
Virginia snake-root
wild valerian
zedoary
Saffron
Sal ammoniac, crude
volatile
Salt of hartshorn
of natron prepared
of natron vitriolated
of nitre purified
of magnesia vitriolated
of polychrest
of tartar
Seeds, anise
barley (pearl)
caraway
cardamom
coriander
cumin
linseed
mustard
sweet fennel
wild carrot
Senna
Spirits of ammonia compound
of lavender compound
of æther nitrous
of æther vitriolic
of hartshorn more properly called volatile liquor of hartshorn
of wine rectified

Spanish flies
Spermaceti
Sulphur vivum
flowers of
Syrup of balsam Tolu
Syrup of black currants
buckthorn
ginger
lemon-juice
manna
of marsh-mallows
mulberries
poppies white
roses
simple
Tar
Barbadoes
Tincture of aloes
of asafœtida
of benzoin, compound
of cardamom compound
of cascarilla
of cinchona, compound
of columba
of ginger
of gentian, compound
of guaiacum, volatile
of hellebore, black
of henbane
of hop
of jalap
of iron ammoniated
of myrrh
of opium camphorated
Tartar, cream of
Tin, prepared
Tincture of rhubarb
of senna
of snake-root
of squills
of valerian ammoniated
Turpentine, Venice
Tutty, levigated
Verdigrise
Vitriol, blue
green
white
Water of ammonia
of acetated ammonia
of aniseed
of cinnamon
of peppermint
of spearmint
of pennyroyal
of pimento
Wax, white
yellow
Wine of antimony
tartarised
ipecacuanha
of iron
Woods, guaiacum
logwood
sassafras
saunders, red
quassia
Zinc, flowers of

MEDICAL PREPARATIONS.

ACID.

DILUTED or weak vitriolic Acid.—Take of vitriolic acid one ounce; distilled water seven ounces; mix them by degrees. In making this dilution, a considerable degree of heat is excited, which is apt to crack glass vessels, unless the combination be very cautiously made; and for the same reason, the acid must be poured into the water, not the water into the acid. The dilution, by means of distilled water, is preferable to spring water, which even in its purest state is rarely free from impregnations affecting the acid. In this and most other cases where distilled water cannot easily be had, river water slightly boiled, and, after standing to cool, the impurities having subsided, will answer the general purposes of distilled

water.—This solution of the vitriolic (or, as it is now more properly called, the sulphuric) acid is a medicine that may be given in a glass of pure water, in doses of ten to forty drops, or more, two or three times in a day, for creating an appetite, allaying inordinate actions of the stomach, sickness and vomiting. It is not unfrequently mixed with the decoction of cinchona and other medicinal preparations, to give the liquor an agreeable acidity, and to render them cooling, antiseptic, restringent, tonic, and stomachic.

BALSAMS.

The subject of this section is not the natural balsams, but certain compositions, which, from their being supposed to possess balsamic qualities, generally go by that name. This class of medicines was formerly very numerous, and held in great esteem: modern practice, however, has justly reduced it to a very narrow compass.

Anodyne Balsam.—Take of white Spanish soap, one ounce; opium, unprepared, two drachms; rectified spirit of wine, nine ounces. Digest them together in a gentle heat for three days; then strain off the liquor, and add to it three drachms of camphor.—This balsam, as its title expresses, is intended to ease pain. It is of service in violent strains and rheumatic complaints, when not attended with inflammation. It must be rubbed with a warm hand on the part affected; or a linen rag moistened with it may be applied to the part, and renewed every third or fourth hour, till the pain abates. If the opium is left out, this will resemble the Soap Liniment, or what is called Opodeldoc.

Locatelli's Balsam.—Take of olive oil, one pint; Strasburg turpentine and yellow wax, of each half a pound; red saunders, six drachms. Melt the wax with some part of the oil over a gentle fire; then add the remaining part of the oil and the turpentine: afterwards mix in the saunders, previously reduced to a powder, and keep them stirring together till the balsam is cold.—This balsam is recommended in erosions of the intestines, the dysentery, hæmorrhages, internal bruises, and in some complaints of the breast. Outwardly it is used for healing and cleansing wounds and ulcers. The dose, when taken internally, is from two scruples to two drachms.

The compound Tincture of Benjamin, or the Vulnerary Balsam.—Take of henzoin, powdered, three ounces; balsam of Peru, two ounces; hepatic aloes, in powder, half an ounce; rectified spirit of wine, two pints. Digest them in a gentle heat for three days, and then strain the balsam.—This balsam, or rather tincture, is applied externally to heal recent wounds and bruises. It is likewise employed internally to remove coughs, asthmas, and other complaints of the breast. It is said to ease the colic, cleanse the kidneys, and to heal internal ulcers, &c.—The dose is from twenty to sixty drops.—This, though a medicine of some value, does not deserve the extravagant encomiums which have been bestowed on it. It has been celebrated under the different names of The Commander's Balsam, Persian Balsam, Balsam of Berne, Wade's Balsam, Friar's Balsam, Jesuit's Drops, Turlington's Drops, &c.

BOLUSES.

As boluses are intended for immediate use, volatile salts and other ingredients improper for being kept are admitted into their composition. They are generally composed of powders, with a proper quantity of syrup, conserve or mucilage. The lighter powders are commonly made up with syrup, and the more ponderous, as mercury, &c., with conserve; but those of the lighter kind would be more conveniently made up with mucilage, as it increases their bulk less than the other additions, and likewise occasions the medicine to pass down more easily.

Astringent Bolus.—Take of alum, in powder, fifteen grains; gum kino, five grains; syrup, a sufficient quantity to make a bolus.—In an excessive flow of the menses, and other violent discharges of blood, proceeding from relaxation, this bolus may be given every four or five hours, till the discharge abates.

Diaphoretic Bolus. Take of gum guaiacum, in powder, ten grains; flowers of sulphur and cream of tartar, of each one scruple; simple syrup, a sufficient quantity.—In rheumatic complaints, and disorders of the skin, this bolus may be taken twice a-day. It will also be of service in the inflammatory quinsy.

Mercurial Bolus.—Take of calomel, six grains; conserve of roses, half a drachm. Make a bolus.—Where mercury is necessary, this bolus may be taken twice or thrice a week. It may be taken over night; and if it does not operate, a few grains of jalap will be proper next day to carry it off.

Bolus of Rhubarb and Calomel.—Take of the best rhubarb, in powder, from a scruple to half a drachm; of calomel, from four to six grains; simple syrup, a sufficient quantity to make a bolus.—This is a proper purge in hypochondriac constitutions; but its principal intention is to expel worms. Where a stronger purge is necessary, jalap may be used instead of rhubarb.

Pectoral Bolus.—Take of spermaceti, a scruple; gum ammoniac, ten grains; salt of hartshorn, six grains; simple syrup, as much as will make them into a bolus.—This bolus is given in colds and coughs of long standing, asthmas, and beginning consumptions of the lungs. It is generally proper to bleed the patient before he begins to use it.

Purging Bolus.—Take of jalap, in powder, a scruple; cream of tartar, two scruples. Let them be rubbed together, and formed into a bolus, with simple syrup.—Where a mild purge is wanted, this will answer the purpose very well. If a stronger dose is necessary, the jalap may be increased to half a drachm or upwards.

CATAPLASMS AND SINAPISMS.

Cataplasms possess few or no virtues superior to a poultice, which may be so made, as, in most cases, to supply their place. They are chiefly intended either to act as discutients, or to promote suppuration; and as they may be of service in some cases, we shall give a specimen of each kind.

Discutient Cataplasm.—Take of barley-meal, six ounces; fresh hemlock leaves, bruised, two ounces; vinegar, a sufficient quantity. Boil

the meal and hemlock in the vinegar for a little, and then add two drachms of acetated ceruse.

Ripening Cataplasm.—Take of white lily root, four ounces; fat figs and raw onions, bruised, of each one ounce; ointment of yellow resin, two ounces; gum galbanum, half an ounce; linseed meal, as much as necessary. Boil the roots along with the figs in a sufficient quantity of water; then bruise and add to them the other ingredients, so as to form the whole into a soft cataplasm. The galbanum must be previously dissolved with the yolk of an egg.—Where it is necessary to promote suppuration, this cataplasm may be used by those who choose to be at the trouble and expense of making it. For my part, I have never found any application more proper for this purpose than a poultice of bread and milk, with a sufficient quantity of either boiled or raw onion in it, and softened with oil or fresh butter.

Sinapisms.—Sinapisms are employed to recal the blood and spirits to a weak part, as in the palsy and atrophy. They are also of service in deep-seated pains, as the sciatica, &c. When the gout seizes the head or the stomach, they are applied to the feet to bring the disorder to these parts. They are likewise applied to the patient's soles in the low state of fevers. They should not be suffered to lie on, however, till they have raised blisters, but till the parts become red, and will continue so when pressed with the finger.—The sinapism is only a poultice made with vinegar instead of milk, and rendered warm and stimulating by the addition of mustard, horse-radish, or garlic.—The common sinapism is made by taking crumb of bread and mustard-seed in powder, of each equal quantities; strong vinegar, as much as is sufficient, and mixing them so as to make a poultice.—When sinapisms of a more stimulating nature are wanted, a little bruised garlic may be added to the above.

CERATES.

Cerates are substances intended for external application, formed of nearly the same materials which constitute ointments and plasters. And they differ principally from these in being merely of an intermediate consistence between the two.

Cerate of Calomel.—Take of calomel prepared one drachm, calamine cerate half an ounce. Mix.—This is a good occasional application to ulcers, and is more particularly serviceable in those of a venereal kind, when previously cleansed by caustic or irritating remedies.

Cerate of Calamine.—Take of olive oil one pint, calamine prepared, and yellow wax, of each half a pound. Melt the wax with the oil, and as soon as the mixture begins to thicken, mix with it the calamine, and stir the cerate until it be cold.—This composition is formed upon the plan of that which is commonly known by the name of Turner's Cerate, and which is an exceedingly good application in burns, and in cutaneous ulcerations and excoriations from whatever cause.

CLYSTERS.

This class of medicines is of more importance than is generally imagined. Clysters serve not only to evacuate the contents of the belly, but also to convey very active medicines into the system. Opium, for

example, may be administered in this way when it will not sit upon the stomach, and also in larger doses than at any time it can be taken by the mouth. The Peruvian bark may likewise be, with good effect, administered in form of clyster to persons who cannot take it by the mouth.—A simple clyster can seldom do hurt, and there are many cases where it may do much good. A clyster even of warm water, by serving as a fomentation to the parts, may be of considerable service in inflammations of the bladder and the lower intestines, &c. Some substances, as the smoke of tobacco, may be thrown into the bowels in this way, which cannot by any other means whatever. This may be easily effected by means of a pair of hand-bellows, with an apparatus fitted to them for that purpose. Nor is the use of clysters confined to medicines. Aliment may also be conveyed in this way. Persons unable to swallow have been, for a considerable time, supported by clysters.

Emollient Clyster.—Take of linseed tea and new milk, each six ounces. Mix them.—If fifty or sixty drops of laudanum be added to this, it will supply the place of the Anodyne Clyster.

Laxative Clyster.—Take of milk and water, each six ounces; sweet oil or fresh butter, and brown sugar, of each two ounces. Mix them.—If an ounce of Glauber's salt, or two table-spoonfuls of common salt, be added to this, it will be the Purging Clyster.

Carminative Clyster.—Take of camomile flowers, an ounce; anise-seeds, half an ounce. Boil in a pint and half of water to one pint.—In hysteric and hypochondriac complaints this may be administered instead of the Fœtid Clyster, the smell of which is so disagreeable to most patients.

Oily Clyster.—To four ounces of the infusion of camomile flowers, add an equal quantity of Florence oil.—This clyster is beneficial in bringing off the small worms lodged in the lower parts of the alimentary canal. When given to children, the quantity must be proportionably lessened.

Starch Clyster.—Take jelly of starch, four ounces; linseed oil, half an ounce. Liquefy the jelly over a gentle fire, and then mix in the oil. —In the dysentery or bloody flux, this clyster may be administered after every loose stool, to heal the ulcerated intestines, and blunt the sharpness of corroding humours. Forty or fifty drops of laudanum may be occasionally added; in which case, it will generally supply the place of the Astringent Clyster.

Turpentine Clyster.—Take of common decoction, ten ounces; Venice turpentine, dissolved with the yolk of an egg, half an ounce; Florence oil, one ounce. Mix them.—This diuretic clyster is proper in obstructions of the urinary passages, and in colicky complaints proceeding from gravel.

Vinegar Clyster.—This clyster is made by mixing three ounces of vinegar with five of water-gruel.—It answers all the purposes of a common clyster, with the peculiar advantage of being proper either in inflammatory or putrid disorders, especially in the latter.—We think it unnecessary to give more examples of this class of medicines, as ingredients adapted to any particular intention may be occasionally added to one or other of the above forms.

COLLYRIA, OR EYE-WATERS.

EYE-WATERS have been multiplied without number, almost every person pretending to be possessed of some secret preparation for the cure of sore eyes. I have examined many of them, and find that they are pretty much alike, the basis of most of them being either alum, vitriol, or lead. Their effects evidently are, to brace and restore the tone of the parts: hence they are principally of service in slight inflammations, and in that relaxed state of the parts which is induced by obstinate ones. Camphor is commonly added to these compositions; but as it seldom incorporates properly with the water, it can be of little use. Boles, and other earthy substances, as they do not dissolve in water, are likewise unfit for this purpose.

Collyrium of Alum.—Take of alum, half a drachm; agitate it well together with the white of one egg.—This is the Collyrium of Riverius. It is used in inflammation of the eyes, to allay heat, and restrain the flux of humours. It must be spread upon linen, and applied to the eyes; but should not be kept on above three or four hours at a time.

Vitriolic Collyrium.—Take of white vitriol, half a drachm; rose-water, six ounces. Dissolve the vitriol in the water; and filter the liquor.—This, though simple, is perhaps equal in virtue to most of the celebrated collyria. It is an useful application in weak, watery, and inflamed eyes. Though the slighter inflammations will generally yield to it, yet in those of a more obstinate nature the assistance of bleeding and blistering will always be necessary.—When a strong astringent is judged proper, a double or triple quantity of the vitriol may be used. I have seen a solution of four times the strength of the above used with manifest advantage.

Collyrium of Lead.—Take acetated ceruse and crude sal ammoniac, of each four grains. Dissolve them in eight ounces of common water.—Forty or fifty drops of laudanum may be occasionally added to this collyrium.—Those who chuse may substitute instead of this the collyrium of lead recommended by Goulard; which is made by putting twenty-five drops of his Extract of Lead (i. e. water of acetated litharge) to eight ounces of water, and adding a tea-spoonful of brandy.—Indeed, common water and brandy, without any other addition, will in many cases answer very well as a collyrium. An ounce of the latter may be added to five or six ounces of the former, and the eyes, if weak, bathed with it night and morning.

CONFECTIONS.

CONFECTIONS containing above thirty ingredients are still to be found in some of the most reformed dispensatories. As most of their intentions, however, may be more certainly and as effectually answered by a few glasses of wine, or grains of opium, we shall pass over this class of medicines very slightly.

Electuary of Catechu, commonly called Japonic Confection.—Take of catechu, three ounces; tormentil root, nutmeg, olibanum, of each two ounces; opium, dissolved in a sufficient quantity of Lisbon wine, a drachm and a half; simple syrup and conserve of roses, of each fourteen ounces. Mix and make them into an electuary.—This supplies the

place of the diascordium.—The dose of this electuary is from a scruple to a drachm.

CONSERVES AND PRESERVES.

EVERY apothecary's shop was formerly so full of these preparations, that it might have passed for a confectioner's warehouse. They possess very few medicinal properties, and may rather be classed among sweetmeats than medicines. They are sometimes, however, of use for reducing into boluses or pills some of the more ponderous powders, as the preparations of iron, quicksilver and tin. Conserves are compositions of fresh vegetables and sugar beaten together into an uniform mass. In making these preparations, the leaves of vegetables must be freed from their stalks, the flowers from their cups, and the yellow part of orange-peel taken off with a rasy. They are then to be pounded in marble mortar, with a wooden pestle, into a smooth mass; after which, thrice their weight of fine sugar is commonly added by degrees, and the beating continued till they are uniformly mixed; but the conserve will be better if only twice its weight of sugar be added. Those who prepare large quantities of conserve generally reduce the vegetables to a pulp by the means of a mill, and afterwards beat them up with the sugar.

Conserve of Red Roses.—Take a pound of red rose-buds, cleared of their beals; beat them well in a mortar, and, adding by degrees two pounds of double-refined sugar, in powder, make a conserve.—After the same manner are prepared the conserves of orange-peel, rosemary-flowers, sea-wormwood, of the leaves of wood-sorrel, &c.—The conserve of roses is one of the most agreeable and useful preparations belonging to this class. A drachm or two of it, dissolved in warm milk, is ordered to be given as a gentle restringent in weakness of the stomach, and likewise in phthisical coughs, and spitting of blood. To have any considerable effects, however, it must be taken in larger quantities.

Conserve of sloes.—This may be made by boiling the sloes gently in water, being careful to take them out before they burst; afterwards expressing the juice, and beating it up with three times its weight of fine sugar.—In relaxations of the UVULA and glands of the throat, this makes an excellent gargle, and may be used at discretion.

Preserves are made by steeping or boiling fresh vegetables first in water, and afterwards in syrup, or a solution of sugar. The subject is either preserved moist in the syrup, or taken out and dried, that the sugar may candy upon it. The last is the most useful method.

Candied Orange-Peel.—Soak Seville orange-peel in several waters, till it loses its bitterness: then boil it in a solution of double-refined sugar in water, till it becomes tender and transparent.—Candied lemon-peel is prepared in the same manner.—It is needless to add more of these preparations, as they belong rather to the art of the confectioner than that of the apothecary.

DECOCTIONS.

WATER readily extracts the gummy and saline parts of vegetables; and though its action is chiefly confined to these, yet the resinous and oily being intimately blended with the gummy and saline, are in great

part taken up along with them. Hence watery decoctions and infusions of vegetables constitute a large, and not unuseful, class of medicines. Although most vegetables yield their virtues to water, as well by infusion as decoction, yet the latter is often necessary, as it saves time, and does in a few minutes what the other would require hours, and sometimes days, to effect. The medicines of this class are all intended for immediate use.

Compound Decoction of Althæa, or Marshmallows.—Take of the roots of marshmallows, moderately dried, two or three ounces; raisins of the sun, one ounce; water, three pints. Boil the ingredients in water till one third of it is consumed, afterwards strain the decoction, and let it stand for some time to settle. If the roots be thoroughly dried, they must be boiled till one half of the water be consumed.—In coughs, and sharp defluxions upon the lungs, this decoction may be used for ordinary drink.

Decoction of the Cinchona.—Boil an ounce of Peruvian bark, grossly powdered, in a pint and a half of water to one pint; then strain the decoction. If a tea-spoonful of the diluted acid of vitriol be added to this medicine, it will render it both more agreeable and efficacious.

Compound Decoction of Peruvian Bark, or Cinchona.—Take of cinchona and Virginian snake-root, grossly powdered, each three drachms. Boil them in a pint of water to one half. To the strained liquor add an ounce and a half of aromatic water.—Sir John Pringle recommends this as a proper medicine towards the decline of malignant fevers, when the pulse is low, the voice weak, and the head affected with a stupor, but with little delirium.—The dose is four spoonfuls every fourth or sixth hour.

The Decoction for a Clyster.—Take of camomile flowers, one ounce; elder flowers, and sweet fennel seeds, of each half an ounce; water, two quarts. Boil them for a little, and then strain the decoction.—A medicine equally good may be prepared by infusing the ingredients for some hours in boiling water.—This decoction is chiefly intended as the basis of clysters, to which other ingredients may be occasionally added. It will likewise serve as a common fomentation, spirit of wine or other things being added in such quantity as the case may require.

Decoction of Barley.—Take of pearl-barley, two ounces: distilled water, four pints. First wash the barley with cold water from the adhering impurities, pour upon it about half a pint of water, and boil the barley a little time. This water being thrown away, add the distilled water, boiling, to the barley; boil it to two pints, and strain.—This method of preparing barley-water produces a more elegant beverage for the sick than the methods usually employed by nurses. This liquor is to be drank as a diluter in fevers and other disorders. Hippocrates, the immortal Father of Physic recommended it; and the practitioners of medicine in every succeeding age have found it to be an excellent nutrimental diluent. It has been well observed, that, "however trivial medicines of this class may appear to be, they are often of greater importance in the cure of diseases than more elaborate preparations."

Decoction of Logwood.—Boil three ounces of the shavings or chips of logwood in four pints of water, till one half the liquor is wasted. Two or three ounces of simple cinnamon-water may be added to this decoction.—In fluxes of the belly, where the stronger astringents are im-

proper, a tea-cupful of this decoction may be taken with advantage three or four times a-day.

Decoction of Pomegranate-root.—Take of the fresh rind of the pomegranate-root, half an ounce; boil it in two cupfuls of water to one half. Half this quantity must be taken gradually, and the remainder at once. This occasions sickness and vomiting, but it is effectual in bringing away the tænia, or tape-worm.—This recipe has recently been communicated by Dr. Buchanan, one of the surgeons on the Bengal establishment. We understand "two cupfuls" to be from six to eight ounces. Dr. B. says, he has seen this medicine exhibited in several cases; and in none has it failed.—The presence of this worm is attended by a sense of great weight and uneasiness in the abdomen, an unusual appetite, and constant craving for food.

Decoction of Sarsaparilla.—Take of fresh sarsaparilla root, sliced and bruised, two ounces; shavings of guaiacum wood, one ounce. Boil over a slow fire, in three quarts of water, to one; adding towards the end half an ounce of sassafras wood, and three drachms of liquorice. Strain the decoction.—This may either be employed as an assistant to a course of mercurial alteratives, or taken after the mercury has been used for some time. It strengthens the stomach, and restores flesh and vigour to habits emaciated by the venereal disease. It may also be taken in the rheumatism, and cutaneous disorders proceeding from foulness of the blood and juices. For all these intentions it is greatly preferable to the Decoction of Woods.—This decoction may be taken, from a pint and a half to two quarts in the day.—The following decoction is said to be similar to that used by Kennedy, in the cure of the venereal disease, and may supply the place of Lisbon diet drink: Take of sarsaparilla, three ounces; liquorice and mezereon root, of each half an ounce; shavings of guaiacum, and sassafras wood, of each one ounce; crude antimony, powdered, an ounce and a half. Infuse these ingredients in eight pints of boiling water for twenty-four hours, then boil them till one half of the water is consumed; afterwards strain the decoction.—This decoction may be used in the same manner as the preceding.

Decoction of Seneka.—Take of seneka rattle-snake root, one ounce; water, a pint and a half. Boil to one pint, and strain.—This decoction is recommended in the croup, pleurisy, dropsy, rheumatism, and some obstinate disorders of the skin. The dose is two ounces three or four times a-day, or oftener, if the stomach will bear it.

Compound Decoction of Chalk, or White Decoction.—Take of the purest chalk, in powder, two ounces; gum arabic, half an ounce, water, three pints. Boil to one quart, and strain the decoction.—This is a proper drink in acute diseases, attended with or inclining to a looseness, and where acidities abound in the stomach or bowels. It is peculiarly proper for children when afflicted with sourness of the stomach, and for persons who are subject to the heart-burn. It may be sweetened with sugar, as it is used, and two or three ounces of simple cinnamon-water added to it.—An ounce of powdered chalk, mixed with two pints of water, will occasionally supply the place of this decoction, and also of the chalk mixture of the London Pharmacopœia.

DRAUGHTS.

This is a proper form for exhibiting such medicines as are intended to operate immediately, and which do not need to be frequently repeated, as purges, vomits, and a few others, which are to be taken at one dose. Where a medicine requires to be used for any length of time, it is better to make up a larger quantity of it at once, which saves both trouble and expense.

Anodyne Draught.—Take of tincture of opium, twenty-five drops; simple cinnamon-water, an ounce; common syrup, two drachms. Mix them.—In excessive pain, where bleeding is not necessary, and in great restlessness, this composing draught may be taken and repeated occasionally.

Diuretic Draught.—Take of the acetated kali, two scruples; syrup of poppies, two drachms; simple cinnamon water, and common water, of each one ounce.—This draught is of service in an obstruction or deficiency of urine.

Purging Draughts.—Take of manna, an ounce; tartarised kali, or Rochelle salt, from three to four drachms. Dissolve in th ee ounces of boiling water; to which add Jamaica pepper-water, half an ounce.—As manna sometimes will not sit upon the stomach, an ounce or ten drachms of the vitriolated magnesia, dissolved in four ounces of water, may be taken instead of the above.—Those who cannot take salts, may use the following draught; Take of jalap in powder, a scruple; common water, an ounce; aromatic tincture, six drachms. Rub the jalap with twice its weight of sugar, and add to it the other ingredients.

Sweating Draughts.—Take water of acetated ammonia, two ounces; salt of hartshorn, five grains; simple cinnamon-water, and syrup of poppies, of each half an ounce. Make them into a draught.—In recent colds and rheumatic complaints, this draught is of service. To promote its effects, however, the patient ought to drink freely of warm water-gruel, or of some other weak diluting liquor, in bed.

Vomiting Draughts.—Take of ipecacuanha, in powder, a scruple; water, an ounce; simple syrup, a drachm. Mix them.—Persons who require a stronger vomit may add to the above half a grain, or a grain, of tartarised antimony.—Those who do not choose the powder, may take ten drachms of the ipecacuanha wine; or half an ounce of the wine, and an equal quantity of the syrup of squills.

ELECTUARIES.

Electuaries are generally composed of the lighter powders, mixed with syrup, honey, conserve, or mucilage, into such a consistence, that the powders may neither separate by keeping, nor the mass prove too stiff for swallowing. They receive chiefly the milder alterative medicines, and such as are not ungrateful to the palate. Astringent electuaries, and such as have pulps of fruit in them, should be prepared only in small quantities; as astringent medicines lose their virtues by being kept in this form, and the pulps of fruits are apt to ferment.

For the extraction of pulps it will be necessary to boil unripe fruits, and ripe ones, if they are dried, in a small quantity of water till they

become soft. The pulp is then to be pressed out through a strong hair sieve, or thin cloth, and afterwards boiled to a due consistence, in an earthen vessel, over a gentle fire, taking care to prevent the matter from burning by continually stirring it. The pulps of fruit that are both ripe and fresh may be pressed out without any previous boiling.

Electuary of Senna, or Lenitive Electuary.—Take of senna, in fine powder, eight ounces; coriander seed, also in powder, four ounces; pulp of tamarinds and of French prunes, each a pound. Mix the pulps and powders together, and with a sufficient quantity of simple syrup reduce the whole into an electuary.—A tea-spoonful of this electuary, taken two or three times a-day, generally proves an agreeable laxative. It likewise serves as a convenient vehicle for exhibiting more active medicines, as jalap, scammony, and such like.—This may supply the place of the electuary of cassia.

Electuary for the Dysentery.—Take of the confection of catechu, two ounces; Locatelli's balsam, one ounce; rhubarb in powder, half an ounce; syrup of marsh-mallows, enough to make an electuary.—It is often dangerous in dysenteries to give opiates and astringents, without interposing purgatives. The purgative is here joined with these ingredients, which renders this a very safe and useful medicine for the purposes expressed in the title.—About the bulk of a nutmeg should be taken twice or thrice a-day, as the symptoms and constitution may require.

Electuary for the Epilepsy.—Take of Peruvian bark, in powder, an ounce; of powdered tin, and wild valerian root, each half an ounce; simple syrup, enough to make an electuary.—Dr. Mead directs a drachm of an electuary similar to this to be taken evening and morning, in the epilepsy, for the space of three months. It will be proper, however, to discontinue the use of it for a few days every now and then. I have added the powdered tin, because the epilepsy often proceeds from worms.

Electuary for the Gonorrhœa.—Take of the electuary of senna, three ounces; jalap and rhubarb, in powder, of each two drachms; nitre, half an ounce; simple syrup, enough to make an electuary.—During the inflammation and tension of the urinary passages which accompany a virulent gonorrhœa, this cooling laxative may be used with advantage.—The dose is a drachm, or about the bulk of a nutmeg, two or three times a-day, more or less, as may be necessary to keep the body gently open. —An electuary made of cream of tartar and simple syrup will occasionally supply the place of this.—After the inflammation is gone off, the following electuary may be used: Take of lenitive electuary (electuary of senna), two ounces; balsam of capivi, one ounce; gum guaiacum and rhubarb, in powder, of each two drachms; simple syrup, enough to make an electuary. The dose is the same as of the preceding.

Electuary of Cinchona Bark.—Take of cinchona bark, in powder, three ounces; cascarilla, half an ounce; syrup of ginger, enough to make an electuary. The size of a nutmeg to be taken three or four times a-day.—In the cure of obstinate intermittent fevers, the bark is assisted by the cascarilla. In hectic habits, however, it will be better to leave out the cascarilla, and put three drachms of crude sal-ammoniac in its stead.

Electuary for the Piles.—Take flowers of sulphur one ounce; cream of tartar, half an ounce; treacle a sufficient quantity to form an electuary. —A tea-spoonful of this may be taken three or four times a-day.

Electuary for the Palsy.—Take of powdered mustard-seed, and conserve of roses, each an ounce; syrup of ginger, enough to make an electuary.-- A tea-spoonful of this may be taken three or four times a-day.

Electuary for the Rheumatism.—Take of conserve of roses two ounces; cinnabar of antimony, levigated, an ounce and a half; gum guaiacum, in powder, an ounce; syrup of ginger, a sufficient quantity to make an electuary.—In obstinate rheumatisms, which are not accompanied with a fever, a tea-spoonful of this electuary may be taken twice a-day with considerable advantage.

EMULSIONS.

Emulsions, besides their use as medicines, are also proper vehicles for certain substances which could not otherwise be conveniently taken in a liquid form. Thus camphor, triturated with almonds, readily unites with water into an emulsion. Pure oils, balsams, resins, and other similar substances, are likewise rendered miscible with water by the intervention of mucilages.

Milk of Almonds, or Common Emulsion.—Take of sweet almonds, an ounce and a half; refined sugar half an ounce; water, two pints.—Let the almonds be blanched, and beat up in a marble mortar with the sugar, adding the water by little and little, so as to make an emulsion; afterwards let it be strained.

Arabic Emulsion.—This is made in the same manner as the above, adding to the almonds, while beating, two ounces and a half of the mucilage of gum arabic.—Where soft cooling liquors are necessary, these emulsions may be used as ordinary drink.

Camphorated Emulsion.—Take of camphor, half a drachm; sweet almonds, half a dozen; white sugar, half an ounce; mint water, eight ounces. Grind the camphor and almonds well together in a stone mortar, and add by degrees the mint water; then strain the liquor and dissolve in it the sugar. --In fevers, and other disorders which require the use of camphor, a table-spoonful of this emulsion may be taken every two or three hours.

Oily Emulsion.—Take of soft water, six ounces; compound spirit of ammonia, two drachms; Florence oil, an ounce: shake them well together, and add of simple syrup half an ounce.—In recent colds and coughs, this emulsion is generally of service; but if the cough proves obstinate, it will succeed better when made with the tincture of opium ammoniated of the Edinburgh Dispensatory, instead of the volatile aromatic spirit. A table-spoonful of it may be taken every two or three hours.

EXTRACTS.

Extracts are prepared by boiling the subject in water, and evaporating the strained decoction to a due consistence. By this process some of the more active parts of plants are freed from the useless dissoluble earthy matter which makes the larger share of their bulk. Water, however, is not the only menstruum used in the preparation of extracts: sometimes it is joined with spirits, and at other times rectified spirit alone is employed for that purpose. Extracts are prepared from a variety of different drugs, as the bark, gentian, jalap, &c.; but as they require a troublesome and tedious operation, it will be more convenient for a

private practitioner to purchase what he needs of them from a professed druggist, than to prepare them himself. Such of them as are generally used are inserted in our list of such drugs and medicines as are to be kept for private practice.

FOMENTATIONS.

FOMENTATIONS are generally intended either to ease pain, by taking off tension and spasm; or to brace and restore the tone and vigour of those parts to which they are applied. The first of these intentions may generally be answered by warm water, and the second by cold. Certain substances, however, are usually added to water with a view to heighten its effects, as anodynes, aromatics, astringents, &c. We shall therefore subjoin a few of the most useful fomentations, that people may have it in their power to make use of them if they choose.

Anodyne Fomentation.—Take of white poppy-heads, two ounces; elder flowers, half an ounce; water, three pints. Boil till one pint is evaporated, and strain out the liquor.—This fomentation, as its title expresses, is used for relieving acute pain.

Aromatic Fomentation.—Take of Jamaica pepper, half an ounce; red wine, a pint. Boil them a little, and then strain the liquor.—This is intended, not only as a topical application for external complaints, but also for relieving the internal parts. Pains of the bowels, which accompany dysenteries and diarrhæas, flatulent colics, uneasiness of the stomach, and retching to vomit, are frequently abated by fomenting the abdomen and region of the stomach with a warm liquor.

Decoction for Fomentation.—Take tops of wormwood and camomile flowers, dried, of each two ounces; water two quarts. After a slight boiling, pour off the liquor.—Brandy or spirit of wine may be added to this fomentation, in such quantity as the particular circumstances of the case shall require; but these are not always necessary.

Emollient Fomentation.—This is the same as the common decoction.

Strengthening Fomentation.—Take of oak bark, one ounce; granate peel, half an ounce; alum, two drachms; smiths' forge water, three pints. Boil the water with the bark and peel to the consumption of one-third; then strain the remaining decoction, and dissolve in it the alum. —This astringent liquor is employed as an internal fomentation to weak parts: it may also be used internally.

GARGLES.

HOWEVER trifling this class of medicines may appear, they are by no means without their use. They seldom indeed cure diseases, but they often alleviate very disagreeable symptoms; as parchedness of the mouth, foulness of the tongue and fauces, &c. They are peculiarly useful in fevers and sore throats. In the latter, a gargle will sometimes remove the disorder; and in the former, few things are more refreshing or agreeable to the patient, than to have his mouth frequently washed with some soft detergent gargle. One advantage of these medicines is, that they are easily prepared. A little barley-water and honey may be had any where; and if to these be added as much vinegar as will give them an agreeable sharpness, they will make a very useful gargle for softening and cleansing the mouth.—Gargles have the best effect when injected with a syringe.

Attenuating Gargle.—Take of water six ounces; honey, one ounce; nitre, a drachm and a half. Mix them.—This cooling gargle may be used either in the inflammatory quinsy, or in fevers, for cleansing the tongue and fauces.

Common Gargle.—Take of rose-water, six ounces; syrup of clove July-flowers, half an ounce; spirit of vitriol, a sufficient quantity to give it an agreeable sharpness. Mix them.—This gargle, besides cleansing the tongue and fauces, acts as a gentle repellent, and will sometimes remove a slight quinsy.

Detergent Gargle.—Take of the emollient gargle, a pint; tincture of myrrh, an ounce; honey, two ounces. Mix them.—When exulcerations require to be cleansed, or the excretion of tough viscid saliva promoted, this gargle will be of service.

Emollient Gargle.—Take an ounce of marshmallow roots, and two or three figs: boil them in a quart of water till near one half of it be consumed; then strain out the liquor.—If an ounce of honey, and half an ounce of water of ammonia, be added to the above, it will then be an exceeding good attenuating gargle.—This gargle is beneficial in fevers, where the tongue and fauces are rough and parched, to soften these parts, and promote the discharge of saliva.—The learned and accurate Sir John Pringle observes, that in the inflammatory quinsy, or strangulation of the fauces, little benefit arises from the common gargles; that such as are of an acid nature do more harm than good, by contracting the emunctories of the saliva and mucus, and thickening those humours; that a decoction of figs in milk and water has a contrary effect, especially if some sal-ammoniac be added, by which the saliva is made thinner, and the glands brought to secrete more freely; a circumstance always conducive to the cure.

INFUSIONS.

Vegetables yield nearly the same properties to water by infusion as by decoction; and though they may require a longer time to give out their virtues in this way, yet it has several advantages over the other; since boiling is found to dissipate the finer parts of many bitter and aromatic substances, without more fully extracting their medicinal principles.—The author of the New Dispensatory observes, that even from those vegetables which are weak in virtue, rich infusions may be obtained, by returning the liquor upon fresh quantities of the subject, the water loading itself more and more with the active parts; and that these loaded infusions are applicable to valuable purposes in medicine; as they contain in a small compass the finer, more subtile, and active principles of vegetables, in a form readily miscible with the fluids of the human body.

Bitter Infusion.—Take tops of the lesser centaury and camomile flowers, of each half an ounce; yellow rind of lemon and orange peel, carefully freed from the inner white part, of each two drachms. Cut them in small pieces, and infuse them in a quart of boiling water.—For indigestion, weakness of the stomach, or want of appetite, a tea-cupful of this infusion may be taken twice or thrice a-day.

Infusion of Cinchona.—To an ounce of the Peruvian bark, in powder, add four or five table-spoonfuls of brandy, and a pint of boiling water. Let them infuse for two or three days.—This is one of the best preparations of the bark for weak stomachs. In disorders where the corroborat-

ing virtues of that medicine are required a tea-cupful of it may be taken two or three times a-day.

Infusion of Carduus.—Infuse an ounce of the dried leaves of carduus benedictus, or blessed thistle, in a pint of common water, for six hours, without heat; then filter the liquor through paper.—This light infusion may be given, with great benefit, in weakness of the stomach, where the common bitters do not agree. It may be flavoured at pleasure with cinnamon, or other aromatic materials.

Infusion of Linseed.—Take of linseed, two spoonfuls; liquorice root, sliced, half an ounce; boiling water, three pints. Let them stand to infuse by the fire some hours, and then strain off the liquor.—If an ounce of the leaves of colt's-foot be added to these ingredients, it will then be the Pectoral Infusion. Both these are emollient mucilaginous liquors, and may be taken with advantage as ordinary drink in difficulty of making water, and in coughs and other complaints of the breast.

Infusion of Roses.—Take of red roses, dried, half an ounce; boiling water, a quart; vitriolic acid, commonly called oil of vitriol, half a drachm; loaf sugar, an ounce. Infuse the roses in the water for four hours, in an unglazed earthen vessel; afterwards pour in the acid, and having strained the liquor, add to it the sugar.—In an excessive flow of the menses, vomiting of blood, and other hæmorrhages, a tea-cupful of this gently astringent infusion may be taken every three or four hours. It likewise makes an exceeding good gargle.—As the quantity of roses used here can have little or no effect, an equally valuable medicine may be prepared by mixing the acid and water without infusion.

Infusion of Tamarinds and Senna.—Take of tamarinds, one ounce; senna, and crystals of tartar, each two drachms. Let these ingredients be infused four or five hours in a pint of boiling water; afterwards let the liquor be strained, and an ounce or two of the aromatic tincture added to it. Persons who are easily purged may leave out either the tamarinds or the crystals of tartar.—This is an agreeable cooling purge. A tea-cupful may be given every half hour till it operates.—This supplies the place of the Decoction of Tamarinds and Senna.

Spanish Infusion.—Take of Spanish juice, cut into small pieces, an ounce; salt of tartar, three drachms. Infuse in a quart of boiling water for a night. To the strained liquor add an ounce and an half of the syrup of poppies.—In recent colds, coughs, and obstructions of the breast, a tea-cupful of this infusion may be taken with advantage three or four times a-day.

Infusion for the Palsy.—Take of horse-radish root shaved, mustard-seed bruised, each four ounces; outer rind of orange peel, one ounce. Infuse them in two quarts of boiling water, in a close vessel, for twenty-four hours.—In paralytic complaints, a tea-cupful of this stimulating medicine may be taken three or four times a-day. It excites the action of the solids, proves diuretic, and, if the patient be kept warm, promotes perspiration.—If two or three ounces of the dried leaves of marsh-trefoil be used instead of the mustard, it will make the Antiscorbutic Infusion.

JULEPS (now generally termed MIXTURES).

THE basis of Juleps is generally common water, or some simple distilled water, with one-third or one-fourth its quantity of distilled spirituous water, and as much sugar or syrup as is sufficient to ren

der the mixture agreeable. This is sharpened with vegetable or mineral acids, or impregnated with other medicines suitable to the intention.

Camphorated Julep.—Take of camphor, one drachm; rectified spirit of wine, ten drops; double refined sugar, half an ounce; boiling distilled water, one pint. Rub the camphor first with the spirit of wine, then with the sugar; lastly, add the water by degrees, and strain the liquor. —In hysterical and other complaints where camphor is proper, the julep may be taken in the dose of a spoonful or two as often as the stomach will bear it.

Cordial Julep.—Take of simple cinnamon-water, four ounces; Jamaica pepper-water, two ounces; volatile aromatic spirit, and compound spirit of lavender, of each two drachms; syrup of orange-peel, an ounce. Mix them.—This is given in the dose of two spoonfuls three or four times a-day, in disorders accompanied with great weakness and depression of spirits.

Expectorating Julep.—Take of the milk of gum ammoniac, six ounces; syrup of squills, two ounces. Mix them.—In coughs, asthmas, and obstructions of the breast, two table-spoonfuls of this julep may be taken every three or four hours.

Musk Julep.—Rub half a drachm of musk well together with half an ounce of sugar, and add to it, gradually, of simple cinnamon and peppermint-water, each two ounces; of the volatile aromatic spirit, two drachms.—In the low state of nervous fevers, hiccuping, convulsions, and other spasmodic affections, two table-spoonfuls of this julep may be taken every two or three hours.

Saline Julep.—Dissolve two drachms of salt of tartar in three ounces of fresh lemon-juice, strained: when the effervescence is over, add, of mint-water, and common water, each two ounces; of simple syrup, one ounce.—This removes sickness at the stomach, relieves vomiting, promotes perspiration, and may be of some service in fevers, especially of the inflammatory kind.

Vomiting Julep.—Dissolve four grains of tartarised antimony in eight ounces of water, and add to it half an ounce of the syrup of clove July-flowers.—In the beginning of fevers, where there is no topical inflammation, this julep may be given in the dose of one table-spoonful every quarter of an hour till it operates. Antimonial vomits serve not only to evacuate the contents of the stomach, but likewise to promote the different excretions. Hence they are found in fevers to have nearly the same effects as Dr. James's Powder.

MILK.

Milk of Gum Ammoniac.—Take of gum ammoniac two drachms, of distilled water half a pint. Rub the gum resin in a mortar with the water, gradually poured on, till it be dissolved and become an emulsion; then strain the liquor.

Ammoniacum Milk.—(Or as it was formerly called, Emulsion of Gum Ammoniac) is used for attenuating tough viscid phlegm, and promoting expectoration. In obstinate coughs, two ounces of the syrup of poppies may be added to it. The dose is two table-spoonfuls three or four times a-day.

Goat's Milk is sometimes used with the most happy success in hysteric

cases. Goat's whey and ass's milk are chiefly used in pulmonary consumptions; and where ass's milk cannot be got, that of mares may be used as a substitute. There are several formulæ for preparing artificial ass's milk; perhaps the following is one of the best, and not much inferior in its properties to the natural: Take of eringo-root or sea holly, and pearl barley, each half an ounce; liquorice root three ounces; water, two pounds or one quart: boil it down over a gentle fire to one pint; then strain it, and add an equal quantity of new cow's milk. This, if possible, as being the best, should be obtained from the cow at three or four years of age, about three months after producing the calf.

ALMONDS, MILK OF. See EMULSIONS.

MIXTURES.

A MIXTURE differs from a julep in this respect, that it receives into its composition not only salts, extracts and other substances dissolved in water, but also earths, powders, and such substances as cannot be dissolved. A mixture is seldom either an elegant or agreeable medicine. It is nevertheless necessary. Many persons can take a mixture, who are not able to swallow a bolus or an electuary: besides, there are medicines which act better in this than in any other form.

Astringent Mixture.—Take simple cinnamon-water, and common water, of each three ounces, spirituous cinnamon-water, an ounce and a half; confection of catechu, half an ounce. Mix them.—In dysenteries which are not of long standing, after the necessary evacuations, a spoonful or two of this mixture may be taken every four hours, interposing every second or third day a dose of rhubarb.

Diuretic Mixture.—Take of mint-water, five ounces; vinegar of squills, six drachms; spirit of nitrous ether, half an ounce; syrup of ginger, an ounce and a half. Mix them.—In obstructions of the urinary passages, two spoonfuls of this mixture may be taken twice or thrice a-day.

Laxative Absorbent Mixture.—Rub one drachm of magnesia alba in a mortar with ten or twelve grains of the best Turkey rhubarb, and add to them three ounces of common water: simple cinnamon-water, and syrup of sugar, of each one ounce.—As most diseases of infants are accompanied with acidities, this mixture may either be given with a view to correct these, or to open the body. A table-spoonful may be taken for a dose, and repeated three times a-day. To a very young child half a spoonful will be sufficient.—When the mixture is intended to purge, the dose may either be increased, or the quantity of rhubarb doubled.—This is one of the most generally useful medicines for children with which we are acquainted.

Saline Mixture.—Dissolve a drachm of the salt of tartar in four ounces of boiling water, and, when cold, drop into it vitriolic acid till the effervescence ceases; then add, of peppermint-water, two ounces; simple syrup, one ounce.—Where fresh lemons cannot be had this mixture may occasionally supply the place of the saline julep.

Squill Mixture.—Take simple cinnamon-water, five ounces; vinegar of squills, one ounce; syrup of marshmallows, an ounce and a half. Mix them.—This mixture, by promoting expectoration and the secretion of urine, proves serviceable in asthmatic and dropsical habits. A table-spoonful of it may be taken frequently.

Mucilage of Gum Arabic.—Take of gum arabic, four ounces; boiling distilled water, eight ounces, or half a pint. Rub the gum with the water, and frequently stir them until the gum be dissolved. Place a bit of linen in a funnel, and strain the mucilage to divest it of impurities.—The mucilage of gum arabic is very useful in many operations of pharmacy; it is also much used for properties peculiar to substances of its own class, as of all the gums it seems to be the purest.

OINTMENTS, LINIMENTS, and CERATES.

NOTWITHSTANDING the extravagant encomiums which have been bestowed on different preparations of this kind, with regard to their efficacy in the cure of wounds, sores, &c., it is beyond a doubt that the most proper application to a green wound is dry lint. But though ointments do not heal wounds and sores, yet they serve to defend them from the external air, and to retain such substances as may be necessary for drying, deterging, destroying proud flesh, and such like. For these purposes, however, it will be sufficient to insert only a few of the most simple forms, as ingredients of a more active nature can occasionally be added to them.

Ointment of Yellow Resin, or Yellow Basilicum Ointment.—Take of yellow-wax, white resin, and frankincense, each a quarter of a pound, melt them together over a gentle fire; then add, of hogs' lard prepared, one pound. Strain the ointment while warm.—This ointment is employed for cleansing and healing wounds and ulcers.

Emollient Ointment.—Take of palm oil, two pounds; olive oil, a pint and a half; yellow wax, half a pound; Venice turpentine, a quarter of a pound. Melt the wax in the oils over a gentle fire; then mix in the turpentine, and strain the ointment.—This supplies the place of ointment of marshmallows. It may be used for anointing inflamed parts, &c.

Ointment for the Eyes.—Take of hogs' lard prepared, four ounces; white wax, two drachms; tutty prepared, one ounce: melt the wax with the lard over a gentle fire, and then sprinkle in the tutty, continually stirring them till the ointment is cold. This ointment will be more efficacious, and of a better consistence, if two or three drachms of camphor be rubbed up with a little oil, and intimately mixed with it.

Another.—Take of camphor, and calamine stone levigated, each six drachms; verdigrise well prepared, two drachms; hogs' lard and mutton suet, prepared, of each two ounces. Rub the camphor well with the powder, afterwards mix in the lard and suet, continuing the triture till they be perfectly united.—This ointment has been long in esteem for diseases of the eyes: it ought, however, to be used with caution, when the eyes are much inflamed or very tender.

Issue Ointment.—Mix half an ounce of Spanish flies, finely powdered, in six ounces of ointment of yellow wax.—This ointment is chiefly intended for dressing blisters, in order to keep them open during pleasure.

Ointment of Acetated Ceruse.—Take of olive oil, half a pint; white wax, two ounces; acetated ceruse, three drachms. Let the acetated ceruse, reduced into a fine powder, be rubbed up with some part of the oil, and afterwards added to the other ingredients, previously melted together, continually stirring them till quite cold.—This cooling and gently

astringent ointment may be used in all cases where the intention is to dry and skin over the part, as in scalding, &c.

Ointment of quicksilver.—Take of quicksilver, two ounces; hogs' lard, three ounces; mutton suet, one ounce. Rub the quicksilver with an ounce of hogs' lard in a warm mortar, till the globules be perfectly extinguished; then rub it up with the rest of the lard and suet, previously melted together.—The principal intention of this ointment is to convey mercury into the body by being rubbed upon the skin.

Ointment of Sulphur.—Take of hogs' lard prepared, four ounces; flowers of sulphur, an ounce and a half; crude sal-ammoniac, two drachms; essence of lemon, ten or twelve drops. Make them into an ointment.—This ointment, rubbed upon the parts affected, will generally cure the itch. It is both the safest and best application for that purpose, and, when made in this way, has no disagreeable smell.

Ointment of spermaceti.—Take of olive oil, one pint; white wax and spermaceti, of each three ounces. Melt them with a gentle heat, and keep them constantly and briskly stirring together, till quite cold.—If two drachms of camphor, previously rubbed with a small quantity of oil, be added to the above, it will make the White Camphorated Ointment.

Liniment for Burns.—Take equal parts of Florence oil, or of fresh drawn linseed oil, and lime-water; shake them well together in a wide-mouthed bottle, so as to form a liniment.—This is found to be an exceeding proper application for recent scalds or burns. It may either be spread upon a cloth, or the parts affected may be anointed with it twice or thrice a-day.

White Liniment.—This is made in the same manner as the ointment of spermaceti, two thirds of the wax being left out.—This liniment may be applied in cases of excoriation, where, on account of the largeness of the surface, the ointments with lead or calamine might be improper.

Liniment for the Piles.—Take of emollient ointment, two ounces; liquid laudanum, or tincture of opium, half an ounce. Mix these ingredients with the yolk of an egg, and work them well together.

Liniment of Ammonia, or, Volatile Liniment.—Take of Florence oil, an ounce; volatile liquor of hartshorn, half an ounce. Shake them together.—This liniment, made with equal parts of the spirit and oil, will be more efficacious, where the patient's skin is able to bear it.—Sir John Pringle observes, that, in the inflammatory quinsy, a piece of flannel moistened with this liniment, and applied to the throat, to be renewed every four or five hours, is one of the most efficacious remedies; and that it seldom fails, after bleeding, either to lessen or carry off the complaint. The truth of this observation I have often experienced.

Camphorated Oil.—Rub an ounce of camphor, with two ounces of Florence oil, in a mortar, till the camphor be entirely dissolved.—This antispasmodic liniment may be used in obstinate rheumatisms, and in some other cases accompanied with extreme pain and tension of the parts.

PILLS.

Medicines which operate in a small dose, and whose disagreeable taste or smell makes it necessary that they should be concealed from the palate, are most commodiously exhibited in this form. No medicine, however, that is intended to operate quickly, ought to be made into pills,

as they often lie for a considerable time on the stomach before they are dissolved, so as to produce any effect. As the ingredients which enter the composition of pills are generally so contrived, that one pill of an ordinary size may contain about five grains of the compound, in mentioning the dose we shall only specify the number of pills to be taken; as one, two, three, &c.

Anodyne Pill.—Take of purified opium, ten grains: Castile soap, half a drachm. Beat them together, and form the whole into twenty pills.—When a quieting draught will not sit upon the stomach, one, two, or three of these pills may be taken, as occasion requires.

Asafœtida Pill.—Take of asafœtida, half an ounce; simple syrup, as much as is necessary to form it into pills.—In hysteric complaints, four or five pills, of an ordinary size, may be taken twice or thrice a-day. They may likewise be of service to persons afflicted with the asthma.—When it is necessary to keep the body open, a proper quantity of rhubarb, aloes, or jalap, may occasionally be added to the above mass.

Hemlock Pill.—Take any quantity of the inspissated juice of hemlock, and adding to it about a fifth part its weight of the powder of the dried leaves, form it into pills of the ordinary size.—The extract of hemlock may be taken from one grain to several drachms in the day. The best method, however, of using these pills, is to begin with one or two, and to increase the dose gradually, as far as the patient can bear them without any remarkable degree of stupor or giddiness.

Quicksilver or Mercurial Pill.—Take of purified quicksilver and honey, each half an ounce. Rub them together in a mortar, till the globules of mercury are perfectly extinguished; then add, of Castile soap two drachms; powdered liquorice, or crumb of bread, a sufficient quantity to give the mass a proper consistence for pills.—When stronger mercurial pills are wanted, the quantity of quicksilver may be doubled.—The dose of these pills is different, according to the intention with which they are given. As an alterant, two or three may be taken daily. To raise a salivation, four or five will be necessary.—Equal parts of the above pill and powdered rhubarb made into a mass, with a sufficient quantity of simple syrup, will make a Mercurial purging Pill.

Pill of Muriated Quicksilver.—Dissolve fifteen grains of the corrosive sublimate of mercury in two drachms of the saturated solution of crude sal-ammoniac, and make it into a paste, in a glass mortar, with a sufficient quantity of the crumb of bread. This mass must be formed into one hundred and twenty pills.—This pill, which is the most agreeable form of exhibiting the sublimate, has been found efficacious, not only in curing the venereal disease, but also in killing and expelling WORMS, after other powerful medicines had failed.—For the venereal disease, four of these pills may be taken twice a-day, as an alterant three, and for worms two.

Alterative, or Plummer's Pill.—Take of calomel, and precipitated sulphur of antimony, each three drachms; extract of liquorice, two drachms. Rub the sulphur and mercury well together: afterwards add the extract, and, with a sufficient quantity of the mucilage of gum arabic, make them into pills.—This pill has been found a safe alterative in obstinate cutaneous disorders, and has completed a cure after salivation had failed. In venereal cases it has likewise produced excellent effects. Two or three pills of an ordinary size may be taken night and morning,

the patient keeping moderately warm, and drinking after each dose a draught of decoction of the woods, or of sarsaparilla.

Purging Pills.—Take of succotrine aloes, and Castile soap, each two drachms; of simple syrup, a sufficient quantity to make them into pills. —Four or five of these pills will generally prove a sufficient purge. For keeping the body gently open, one may be taken night and morning. They are reckoned both deobstruent and stomachic, and will be found to answer all the purposes of Dr. Anderson's pills, the principal ingredient of which is aloes.—Where aloetic purges are improper, the following pills may be used: Take extract of jalap, and vitriolated kali, of each two drachms; syrup of ginger, as much as will make them of a proper consistence for pills.—These pills may be taken in the same quantity as the above.

Pill for the Jaundice.—Take of Castile soap, succotrine aloes, and rhubarb, of each one drachm. Make them into pills with a sufficient quantity of syrup or mucilage.—These pills, as their title expresses, are chiefly intended for the jaundice, which, with the assistance of proper diet, they will often cure. Five or six of them may be taken twice a-day, more or less, as is necessary to keep the body open. It will be proper however, during their use, to interpose now and then a vomit of ipecacuanha or tartarised antimony.

Stomach Pill.—Take of extract of gentian, two drachms; powdered rhubarb and vitriolated kali, of each one drachm; oil of mint, thirty drops; simple syrup, a sufficient quantity.—Three or four of these pills may be taken twice a-day, for invigorating the stomach, and keeping the body gently open.

Squill pill.—Take powder of dried squills, a drachm and a half; gum ammoniac, and cardamom seeds, in powder, of each three drachms: simple syrup, a sufficient quantity.—In dropsical and asthmatic complaints, two or three of these pills may be taken twice a-day, or oftener, if the stomach will bear them.

Strengthening Pill.—Take soft extract of the cinchona bark, and vitriolated iron, each a drachm. Make into pills.—In disorders arising from excessive debility, or relaxation of the solids, as the chlorosis, or green sickness, two of these pills may be taken three times a-day.

PLASTERS.

Plasters ought to be of a different consistence, according to the purposes for which they are intended. Such as are to be applied to the breasts or stomach ought to be soft and yielding, while those designed for the limbs should be firm and adhesive. It has been supposed that plasters might be impregnated with the virtues of different vegetables, by boiling the recent vegetable with the oil employed for the composition of the plaster; but this treatment does not communicate to the oils any valuable qualities. Calces of lead boiled with oils, unite with them into a plaster of a proper consistence, which make the basis of several other plasters. In boiling these compositions, a quantity of hot water must be added from time to time, to prevent the plaster from burning or growing black. This, however, should be done with care, lest it cause the matter to explode.

Litharge Plaster, formerly called Diachylon or Common Plaster.—

Take of common olive oil, six pints; litharge, reduced to a fine powder, two pounds and a half. Boil the litharge and oil together over a gentle fire, continually stirring them, and keeping always about half a gallon of water in the vessel; after they have boiled about three hours, a little of the plaster may be taken out and put into cold water, to try if it be of a proper consistence; when that is the case, the whole may be suffered to cool, and the water well pressed out of it with the hands.—This plaster is generally applied in slight wounds and excoriations of the skin. It keeps the part soft and warm, and defends it from the air, which is all that is necessary in such cases. Its principal use, however, is to serve as a basis for other plasters.

Adhesive Plaster.—Take of common plaster, half a pound; of Burgundy pitch, a quarter of a pound. Melt them together.—This plaster is principally used for keeping on other dressings.

Anodyne Plaster.—Melt an ounce of adhesive plaster, and, when it is cooling, mix with it a drachm of powdered opium, and the same quantity of camphor, previously rubbed up with a little oil.—This plaster generally gives ease in acute pains, especially of the nervous kind.

Blistering Plaster.—Take of Venice turpentine, six ounces; yellow wax, two ounces; Spanish flies in fine powder, three ounces; powdered mustard, one ounce. Melt the wax, and while it is warm, add to it the turpentine, taking care not to evaporate it by too much heat. After the turpentine and wax are sufficiently incorporated, sprinkle in the powders, continually stirring the mass till it be cold.—Though this plaster is made in a variety of ways, one seldom meets with it of a proper consistence. When compounded with oils and other greasy substances, its effects are blunted, and it is apt to run; while pitch and resin render it too hard and very inconvenient.—When the blistering plaster is not at hand, its place may be supplied by mixing with any soft ointment a sufficient quantity of powdered flies; or by forming them into a paste with flour and vinegar.

Gum Plaster.—Take of the common plaster, four pounds; gum ammoniac and galbanum, strained, of each half a pound. Melt them together, and add, of Venice turpentine, six ounces.—This plaster is used as a digestive, and likewise for discussing indolent tumors.

Mercurial Plaster.—Take of common plaster, one pound; of gum ammoniac, strained, half a pound. Melt them together, and, when cooling, add eight ounces of quicksilver, previously extinguished by triture, with three ounces of hog's lard.—This plaster is recommended in pains of the limbs arising from a venereal cause. Indurations of the glands, and other violent tumors, are likewise found sometimes to yield to it.

Stomach Plaster.—Take of gum plaster, half a pound; camphorated oil, an ounce and a half; black pepper, or capsicum, where it can be had, one ounce. Melt the plaster, and mix with it the oil; then sprinkle in the pepper, previously reduced to a fine powder.—An ounce or two of this plaster, spread upon soft leather, and applied to the region of the stomach, will be of service in flatulencies arising from hysteric and hypochondriac affections. A little of the expressed oil of mace, or a few drops of the essential oil of mint, may be rubbed upon it before it is applied.—This may supply the place of the Antihysteric Plaster.

Warm Plaster.—Take of gum plaster, one ounce; blistering plaster,

two drachms. Melt them together over a gentle fire.—This plaster is useful in the sciatica and other fixed pains of the rheumatic kind: it ought, however, to be worn for some time, and to be renewed at least once a-week. If it is found to blister the part, which is sometimes the case, it must be made with a smaller proportion of the blistering plaster.

Wax Plaster.—Take of yellow wax, one pound; white resin, half a pound; mutton suet, three quarters of a pound. Melt them together.—This is generally used instead of the Melilot Plaster. It is a proper application after blisters, and in other cases where a gentle digestive is necessary.

POWDERS.

This is one of the most simple forms in which medicine can be administered. Many medicinal substances, however, cannot be reduced into powder, and others are too disagreeable to be taken in this form. The lighter powders may be mixed in any agreeable thin liquor, as tea or water-gruel. The more ponderous will require a more consistent vehicle, as syrup, conserve, jelly, or honey.—Gums, and other substances, which are difficult to powder, should be pounded along with the drier ones; but those which are too dry, especially aromatics, ought to be sprinkled during their pulverization with a few drops of any proper water.—Aromatic powders are to be prepared only in small quantities at a time, and kept in glass vessels closely stopped. Indeed no powders ought to be exposed to the air, or kept too long, otherwise their virtues will be in a great measure destroyed.

Astringent Powder.—Take of alum and catechu, each two drachms. Pound them together, and divide the whole into ten or twelve doses.—In an immoderate flow of the menses, and other hæmorrhages, one of these powders may be taken every hour, or every half hour, if the discharge be violent.

Powder of Bole.—Take of bole armoniac, or French bole, two ounces; cinnamon, one ounce; tormentil root and gum arabic, of each six drachms; long pepper, one drachm. Let all these ingredients be reduced into a powder.—This warm, glutinous astringent powder is given in fluxes, and other disorders where medicines of that class are necessary, in the dose of a scruple, or half a drachm. If a drachm of opium be added, it will make the Powder of Bole with Opium, which is a medicine of considerable efficacy. It may be taken in the same quantity as the former, but not above twice or thrice a-day.

Carminative Powder.—Take of coriander-seed, half an ounce; ginger, one drachm; nutmegs, half a drachm; fine sugar, a drachm and a half. Reduce them into powder for twelve doses.—This powder is employed for expelling flatulencies arising from indigestion, particularly those to which hysteric and hypochondriac persons are so liable. It may likewise be given in small quantities to children in their food, when troubled with gripes.

Diuretic Powder.—Take of gum arabic, four ounces; purified nitre, one ounce. Pound them together, and divide the whole into twenty-four doses.—During the first stage of the venereal disease, one of these cooling powders may be taken three times a-day, with considerable advantage.

Laxative Aromatic Powder.—Take of the best Turkey rhubarb,

cinnamon, and fine sugar, each two drachms. Let the ingredients be pounded, and afterwards mixed well together.—When flatulency is accompanied with costiveness, a tea-spoonful of this powder may be taken once or twice a-day, according to circumstances.

Saline Laxative Powder.—Take of tartarised kali, and cream of tartar, each one drachm; purified nitre, half a drachm. Make them into powder.—In fevers, and other inflammatory disorders, where it is necessary to keep the body gently open, one of these cooling laxative powders may be taken in a little gruel, and repeated occasionally.

Chalybeate Powder.—Take filings of iron, and loaf-sugar, of each two ounces; ginger, two drachms. Pound them together.—In obstructions of the menses, and other cases where steel is proper, a tea-spoonful of this powder may be taken twice a-day, and washed down with a little wine or water.

Sudorific Powder, or Compound Powder of Ipecacuanha.—Take purified nitre and vitriolated kali, of each half an ounce; opium and ipecacuanha, of each one drachm. Mix the ingredients, and reduce them to a fine powder.—This is generally known by the name of Dover's Powder. It is a powerful sudorific. In obstinate rheumatisms, and other cases where it is necessary to excite a copious sweat, this powder may be administered in the dose of a scruple or half a drachm. Some patients will require two scruples. It ought to be accompanied with the plentiful use of some warm diluting liquor.

Worm-powders.—Take of tin reduced into a fine powder, an ounce; quicksilver with sulphur, two drachms. Mix them well together, and divide the whole into six doses.—One of these powders may be taken in a little syrup, honey, or treacle, twice a-day. After they have been all used, the following anthelmintic purge may be proper.

Purging Worm-powder.—Take of powdered rhubarb, a scruple; scammony and calomel, of each five grains. Rub them together in a mortar for one dose. This is enough for an adult.—For children the above doses must be lessened according to their age, in the proportions mentioned in the introduction to the Appendix.—If the powder of tin be given alone, its dose may be considerably increased. The late Dr. Alston gave it to the amount of two ounces in three days, and says, when thus administered, that it proved an egregious anthelmintic. He purged his patients both before they took the powder and afterwards.

Powder of the Root of the Male-fern, for the Tape-worm.—Early in the morning the patient is to take in any liquid two or three drachms, according to his age and constitution, of the root of the male-fern reduced into a fine powder. About two hours afterwards, he is to take of calomel and resin of scammony, each ten grains; gum gamboge, six grains. These ingredients must be finely powdered, and given in a little syrup, honey, treacle, or any thing that is most agreeable to the patient. He is then to walk gently about, now and then drinking a dish of weak green tea, till the worm is passed. If the powder of the fern produces nausea, or sickness, it may be removed by sucking the juice of an orange or lemon. This medicine, which had been long kept a secret abroad for the cure of the tapeworm, was some time ago purchased by the French King, and made public for the benefit of mankind. Not having had an opportunity of trying it, I can say nothing from experience concerning

its efficacy. It seems, however, from its ingredients, to be an active medicine, and ought to be taken with care. The dose here prescribed is sufficient for the strongest patient; it must, therefore, be reduced according to the age and constitution.—N. B. The Editor has seldom known any person who could bear to take more than half the quantity of calomel, scammony, &c. above mentioned, for one dose.

SYRUP.

Syrups were some time ago looked upon as medicines of considerable value. They are at present, however, regarded chiefly as vehicles for medicines of greater efficacy, and are used for sweetening draughts, juleps, or mixtures; and for reducing the lighter powders into boluses, pills, and electuaries. As all these purposes may be answered by the simple syrup alone, there is little occasion for any other; especially as they are seldom found but in a state of fermentation, and as the dose of any medicine given in this form is very uncertain. Persons who serve the public must keep whatever their customers call for; but to the private practitioner nine-tenths of the syrups usually kept in the shops are unnecessary.

Syrup of Manna.—Take of manna (the best), and double-refined sugar, each one pound; senna, half an ounce; boiling water, a pound (i. e. a pint.) Macerate the senna in the water, in a covered vessel, for twelve hours; then with the strained liquor mix the manna and the sugar, so that they may be dissolved.—This syrup is a mild laxative, and may be given to infants in doses of a tea-spoonful or two from time to time according to its effect: children of larger growth, and persons of a delicate constitution, for whom this syrup is well adapted, may take it in larger doses.

Simple Syrup: Is made by dissolving in water, either with or without heat, about double its weight of fine sugar.—If twenty-five drops of tincture of opium be added to an ounce of the simple syrup, it will supply the place of diacodium, or the syrup of white poppies, and will be found a more safe and certain medicine.—The lubricating virtues of the syrup of marshmallows may likewise be supplied, by adding to the common syrup a sufficient quantity of mucilage of gum arabic.—Those who choose to preserve the juice of lemons in form of syrup, may dissolve in it, by the heat of a warm bath, nearly double its weight of fine sugar. The juice ought to be previously strained, and suffered to stand till it settles.—The syrup of ginger is sometimes of use as a warm vehicle for giving medicine to persons afflicted with flatulency. It may be made by infusing two ounces of bruised ginger in two pints of boiling water for twenty-four hours. After the liquor has been strained, and has stood to settle for some time, it may be poured off, and a little more than double its weight of fine powdered sugar dissolved in it.

TINCTURES, ELIXIRS, &c.

Rectified spirit is the direct menstruum of the resins and essential oils of vegetables, and totally extracts these active principles from sundry substances, which yield them to water, either not at all, or only in part. It dissolves likewise those parts of animal substances in which their peculiar smells and tastes reside. Hence the tinctures prepared with rectified spirits form an useful and elegant class of medicines, possessing many of the most essential virtues of simples, without being clogged

with their inert or useless parts. Water, however, being the proper menstruum of the gummy, saline, and saccharine parts of medicinal substances, it will be necessary, in the preparation of several tinctures, to make use of a weak spirit, or a composition of rectified spirit and water.

Aromatic Tincture.—Infuse two ounces of Jamaica pepper in two pints of brandy, without heat, for a few days; then strain off the tincture.—This simple tincture will sufficiently answer all the intentions of the more costly preparations of this kind. It is rather too hot to be taken by itself; but it is very proper for mixing with such medicines as might otherwise prove too cold for the stomach.

Compound Tincture of the Cinchona.—Take of Peruvian bark, two ounces; Seville orange-peel and cinnamon, of each half an ounce. Let the bark be powdered, and the other ingredients bruised; then infuse the whole in a pint and a half of brandy, for five or six days, in a close vessel; afterwards strain off the tincture.—This tincture is not only beneficial in intermitting fevers, but also in the slow, nervous, and putrid kinds, especially towards their decline.—The dose is from one drachm to three or four, every fifth or sixth hour. It may be given in any suitable liquor, and occasionally sharpened with a few drops of the vitriolic acid.

Volatile Tincture of Asafœtida.—Infuse two ounces of asafœtida in one pint of compound spirit of ammonia, for eight days, in a close bottle, frequently shaking it; then strain the tincture.—This medicine is beneficial in hysteric disorders, especially when attended with lowness of spirits and faintings. A tea-spoonful of it may be taken in a glass of wine, or a cupful of pennyroyal tea.

Tincture of Fox-Glove.—Take of the dried leaves of fox-glove, one ounce; spirit of wine, eight ounces. Digest for seven days, and strain through paper.—This tincture is a very powerful medicine, and contains the virtues of the fox-glove, easily manageable, under the direction of persons possessing medical skill and experience.—It has been said by some, that it is almost a specific in scarlet fever; but it has been chiefly used as a sedative, to diminish the force of the circulation of the blood in hæmoptysis, and often with remarkable success. It has been also said to cure phthisis pulmonalis. It has, doubtless, been of much service in some cases of that nature; but subsequent experience has not confirmed the hopes that were excited by its first trials in consumptive disorders Like every other form in which the fox-glove is given, it ought to be exhibited in very small doses at first, such as ten to twenty drops to adults, and very cautiously increased, in some cases, to nearly double that number. If, previous to the use of the fox-glove, there is any pain in the chest, or an hæmoptysis; if the pulse is hard, the respiration difficult, and the patient not advanced in life, venesection will be necessary. A blister should be applied to the side, between the shoulders, or over the sternum, in the course of the mediastinum, and the bowels gently evacuated by some of the neutral salts; for they retard the circulation, and diminish the irritability of the heart, by their action on the stomach. These being premised, Dr. Rand recommends the tincture of fox-glove to be administered to consumptive patients in doses of twelve drops three or four times a-day, increasing each dose one drop, till the number of pulsations of the artery is diminished to fifty or sixty, and continued at that number till the disease is removed. Should the medicine have a

very sudden effect in depressing the circulation, and inducing an intermission of the pulse, sickness at stomach, with languor and faintness, its use must be immediately suspended, lest sudden death ensure. The judicious physician above mentioned very properly insists that the patient should be seen by his medical attendant at least every day, as few persons are so conversant with the state of the pulse and respiration as to enable them to judge of the propriety of continuing or suspending the use of this herculean medicine.

Tincture of Hops.—Take of good fresh hops, half an ounce; spirit of wine, ten ounces; digest for seven days, and strain. The dose from forty to a hundred drops, to adults; to younger persons it must be given in diminished doses, according to the proportions directed in p. 416,417.—Hops are one of the most agreeable of the strong bitters; but they have been rarely till of late employed for any medicinal purposes: yet it has been known for many years, that a pillow stuffed with hops, or the odour of hops hung in a bed, induced sleep after opium had failed; but although hops are a narcotic like opium, unlike the latter it seems to have rather a laxative effect. The hop has recently been recommended by men of great medical experience, and is said to have succeeded in such cases as required a light, agreeable bitter, combined with an anodyne quality. In loss of appetite and restless nights; in various cases of dyspepsia attended with pain and flatulency of the stomach and bowels; in painful cases of gout, gravel, stone, or biliary concretions; in severe pains of child-bed women, and other cases where opium could not be exhibited in the usual forms without producing violent head-ach or other very troublesome symptoms; here, says Dr. Fothergill, a strong infusion of the hop, pursued freely both internally and externally, has seldom failed to procure a calm, tranquil sleep.—The best preparation is said to be the tincture. The ingenious Mr. Freake has also prepared an extract of hops, which has been exhibited in pills twice a-day along with draughts containing the tincture, with considerable success, in gouty affections.

Volatile Tincture of Gum Guaiacum.—Take of gum guaiacum, four ounces; volatile aromatic spirit, a pint. Infuse without heat, in a vessel well stopped, for a few days: then strain off the tincture.—In rheumatic complaints, a tea-spoonful of this tincture may be taken in a cup of the infusion of water trefoil, twice or thrice a-day.—A very good tincture of guaiacum, for domestic use, may be made by infusing two or three ounces of the gum in a bottle of rum or brandy.

Tincture of Black Hellebore.—Infuse two ounces of the roots of black hellebore, bruised, in a pint of proof spirit, for seven or eight days; then filter the tincture through paper. A scruple of cochineal may be infused along with the roots, to give the tincture a colour.—In obstructions of the menses, a tea-spoonful of this tincture may be taken in a cup of camomile or pennyroyal-tea twice a-day.

Tincture of Gum Kino.—Digest two ounces of gum kino in a pint and a half of brandy, for eight days; afterwards strain it for use.—This tincture, though not generally known, is a good astringent medicine. With this view, an ounce, or more, of it may be taken three or four times a-day.

Tincture of Myrrh and Aloes.—Take of gum myrrh an ounce and a half; hepatic aloes, one ounce. Let them be reduced to a powder, and

infused in two pints of rectified spirits, for six days, in a gentle heat; then strain the tincture.—This is principally used by surgeons for cleansing foul ulcers, and restraining the progress of gangrenes. It is also, by some, recommended as a proper application to green wounds.

Tincture of Opium, or Liquid Laudanum.—Take of crude opium, two ounces; spirituous aromatic water and mountain wine, of each ten ounces. Dissolve the opium, sliced, in the wine, with a gentle heat, frequently stirring it; afterwards add the spirit, and strain off the tincture. As twenty-five drops of this tincture contain about a grain of opium, the common dose may be from twenty to thirty drops.

Tincture of Hiera Picra.—Take of succotrine aloes in powder, one ounce; Virginian snake-root and ginger, of each two drachms. Infused in a pint of mountain wine, and half a pint of brandy, for a week, frequently shaking the bottle, then strain off the tincture.—This is a safe and useful purge for persons of a languid and phlegmatic habit; but is thought to have better effects, taken in small doses as a laxative.—The dose as a purge, is from one to two ounces.

Compound Tincture of Senna.—Take of senna, one ounce; jalap, coriander seeds, and cream of tartar, of each half an ounce. Infuse them in a pint and a half of French brandy for a week; then strain the tincture, and add to it four ounces of fine sugar.—This is an agreeable purge, and answers all the purposes of the ELIXIR SALUTIS, and of DAFFY'S ELIXIR.—The dose is from one to two or three ounces.

Tincture of Spanish Flies.—Take of Spanish flies, reduced to a fine powder, two ounces; spirit of wine, one pint. Infuse for two or three days; then strain off the tincture.—This is intended as an acrid stimulant for external use. Parts affected with the palsy or chronic rheumatism may be frequently rubbed with it.

Tincture of the Balsam of Tolu.—Take of the balsam of Tolu, an ounce and a half; rectified spirit of wine, a pint. Infuse in a gentle heat until the balsam is dissolved; then strain the tincture.—This tincture possesses all the virtues of the balsam. In coughs, and other complaints of the breast, a tea-spoonful or two of it may be taken on a bit of loaf sugar. But the best way of using it is in syrup. An ounce of the tincture, properly mixed with two pounds of simple syrup, will make what is commonly called the BALSAMIC SYRUP.

Tincture of Rhubarb.—Take of rhubarb, two ounces and a half; lesser cardamom seeds, half an ounce; brandy, two pints. Digest for a week, and strain the tincture.—Those who choose to have a vinous tincture of rhubarb may infuse the above ingredients in a bottle of Lisbon wine, adding to it about two ounces of proof spirits.—If half an ounce of gentian root and a drachm of Virginian snake-root be added to the above ingredients, it will make the bitter tincture of rhubarb.—All these tinctures are designed as stomachics and corroborants as well as purgatives. In weakness of the stomach, indigestion, laxity of the intestines, fluxes, colicky, and such like complaints, they are frequently of great service. The dose is from half a spoonful to three or four spoonfuls or more, according to the circumstances of the patient, and the purposes it is intended to answer.

Tincture of Opium Camphorated, or Paregoric Elixir.—Take of flowers of benzoin, half an ounce; opium, two drachms. Infuse in one

pound of the volatile aromatic spirit for four or five days, frequently shaking the bottle; afterwards strain the elixir.—This is an agreeable and safe way of administering opium. It eases pain, allays tickling coughs, relieves difficult breathings, and is useful in many disorders of children, particularly the hooping cough.—The dose to an adult is from fifty to a hundred drops.

Elixir of Aloes and rhubarb.—Take of rhubarb cut small, ten drachms; succotrine aloes, in powder, six drachms; lesser cardamom seeds, half an ounce: French brandy, half a pint. Infuse for two or three days, then strain the elixir.—This useful stomachic purge may be taken from one ounce to an ounce and a half.

Stomachic Elixir.—Take of gentian root, two ounces; Curacoa oranges, one ounce; Virginian snake-root, half an ounce. Let the ingredients be bruised, and infused for two or three days in two pints of French brandy; afterwards strain out the elixir.—This is an excellent stomachic bitter. In flatulencies, indigestion, want of appetite, and such like complaints, a small glass of it may be taken twice a-day. It likewise relieves the gout in the stomach, when taken in a large dose.

Acid Elixir of Vitriol.—Take of the aromatic tincture, one pint; vitriolic acid, three ounces. Mix them gradually, and after the fæces have subsided, filter the elixir through paper in a glass funnel.—This is one of the best medicines which I know for hysteric and hypochondriac patients, afflicted with flatulencies arising from relaxation or debility of the stomach and intestines. It will succeed where the most celebrated stomachic bitters have no effect. The dose is from ten to forty drops, in a glass of wine or water, or a cup of any bitter infusion, twice or thrice a-day. It should be taken when the stomach is most empty.

Camphorated Spirit of Wine.—Dissolve an ounce of camphor in a pint of rectified spirits.—This solution is chiefly employed as an embrocation in bruises, palsies, the chronic rheumatism, the rickets, and for preventing gangrenes.—The above quantity of camphor, dissolved in half a pound of the volatile aromatic spirit, makes WARD'S ESSENCE.

Water of Acetated Ammonia, or Spirit of Mindererus.—Take of prepared ammonia, any quantity. Pour on it gradually distilled vinegar, till the effervescence ceases.—This medicine is useful in promoting a discharge both by the skin and urinary passage. It is also a good external application in strains and bruises.—When intended to raise a sweat, half an ounce of it in a cup of warm gruel may be given to the patient in bed every hour till it has the desired effect.

Tincture of Wormwood.—Take of the flowering tops of wormwood properly dried, four ounces; rectified spirit of wine two pounds: macerate for two days; then press out the spirit, and pour it upon two ounces of wormwood. Macerate again for four days; then press the tincture through a cloth, and afterwards strain it through paper. This preparation may be considered as containing the whole virtues of a plant that was highly extolled by the illustrious Boerhaave.—In the tincture of wormwood we have one of the strongest vegetable bitters. It is sometimes used as an anthelmintic, and still more frequently in stomach ailments, but to most people it is a very disagreeable medicine.

VINEGARS.

VINEGAR is an acid produced from vinous liquors by a second fermentation. It is an useful medicine both in inflammatory and putrid disorders. Its effects are, to cool the blood, quench thirst, counteract a tendency to putrefaction, and allay inordinate motions of the system. It likewise promotes the natural secretions, and in some cases excites a copious sweat, where the warm medicines, called alexipharmic, tend rather to prevent that salutary evacuation. Weakness, faintings, vomitings, and other hysteric affections, are often relieved by vinegar applied to the mouth and nose, or received into the stomach. It is of excellent use, also, in correcting many poisonous substances when taken into the stomach; and in promoting their expulsion by the different emunctories, when received into the blood. Vinegar is not only an useful medicine, but serves likewise to extract, in tolerable perfection, the virtues of several other medicinal substances. Most of the odoriferous flowers impart to it their fragrance, together with a beautiful purplish or red colour. It also assists, or coincides with the intention of squills, garlic, gum ammoniac, and several other valuable medicines. These effects, however, are not to be expected from every thing that is sold under the name of vinegar, but from such as is sound and well prepared. The best vinegars are those prepared from French wines. It is necessary for some purposes that the vinegar be distilled; but as this operation requires a particular chemical apparatus, we shall not insert it.

Vinegar of Litharge.—Take of litharge, half a pound; strong vinegar two pints. Infuse them together in a moderate heat for three days, frequently shaking the vessel; then filter the liquor for use.—This medicine is little used, from a general notion of its being dangerous. There is reason, however, to believe that the preparations of lead with vinegar are possessed of some valuable properties, and that they may be used in many cases with safety and success.---A preparation of a similar nature with the above has of late been extolled by Goulard, a French surgeon as a safe and extensively useful medicine, which he calls the EXTRACT OF SATURN, and orders to be made in the following manner; Take of litharge, one pound; vinegar made of French wine, two pints. Put them together in a glazed earthen pipkin, and let them boil, or rather simmer, for an hour, or an hour and a quarter, taking care to stir them all the while with a wooden spatula. After the whole has stood to settle pour off the liquor which is upon the top into bottles for use. With this extract Goulard makes his VEGETO-MINERAL WATER (see COLLYRIUM OF LEAD), which he recommends in a great variety of external disorders, as inflammations, burns, bruises, sprains, ulcers, &c. He likewise prepares with it a number of other forms of medicine, as poultices, plasters, ointments, powders, &c.

Vinegar of Roses.—Take of red roses, half a pound; strong vinegar, half a gallon. Infuse in a close vessel for several weeks, in a gentle heat; and then strain off the liquor. This is principally used as an embrocation for head-achs, &c.

Vinegar of Squills.—Take of dried squills, two ounces; distilled vinegar, two pints. Infuse for ten days or a fortnight in a gentle degree of heat, afterwards strain off the liquor, and add to it about a twelfth part

its quantity of proof spirit.—This medicine has good effects in disorders of the breast occasioned by a load of viscid phlegm. It is also of use in hydropic cases for promoting a discharge of urine.—The dose is from two drachms to two ounces, according to the intention for which it is given. When intended to act as a vomit, the dose ought to be large. In other cases, it must not only be exhibited in small doses, but also mixed with cinnamon-water, or some other agreeable aromatic liquor, to prevent the nausea it might otherwise occasion.

WATERS BY INFUSION, &c.

Lime Water.—Pour two gallons of water gradually upon a pound of fresh-burnt quicklime, and, when the ebullition ceases, stir them well together: then suffer the whole to stand at rest, that the lime may settle, and afterwards filter the liquor through paper, which is to be kept in vessels closely stopt. The lime-water from calcined oyster-shells is prepared in the same manner. Lime-water is principally used for the gravel; in which case from a pint or two or more of it may be drank daily. Externally it is used for washing foul ulcers, and removing the itch, and other diseases of the skin.

Compound Lime Water.—Take shavings of guaiacum wood, half a pound; liquorice root, one ounce; sassafras bark, half an ounce; coriander seeds, three drachms; simple lime-water, six pints. Infuse without heat for two days, and then strain off the liquor.—In the same manner may lime-water be impregnated with the virtues of other vegetable substances. Such impregnation not only renders the water more agreeable to the palate, but also a more efficacious medicine, especially in cutaneous disorders and foulness of the blood and juices.—It may be taken in the same quantity as the simple water.

Watery Solution of Muriated Quicksilver.—Dissolve eight grains of the muriated quicksilver in a pint of cinnamon-water.—If a stronger solution be wanted, a double or triple quantity of sublimate may be used. —The principal intention of this is to cleanse foul ulcers and consume proud flesh.

Styptic Water.—Take of blue vitriol and alum, each an ounce and a half; water, one pint. Boil them until the salts are dissolved; then filter the liquor, and add to it a drachm of the oil of vitriol.—This water is used for stopping a bleeding at the nose, and other hæmorrhages; for which purpose cloths or dossils dipt in it must be applied to the part.

Tar Water.—Pour a gallon of water on two pounds of Norway tar, and stir them together with a wooden rod: after they have stood to settle for two days, pour off the water for use.—Though tar-water falls greatly short of the character which has been given of it, yet it possesses some medicinal virtues. It sensibly raises the pulse, increases the secretions, and sometimes opens the body, or occasions vomiting.—A pint of it may be drank daily, or more, if the stomach can bear it. It is generally ordered to be taken on an empty stomach, viz. four ounces morning and evening, and the same quantity about two hours after breakfast and dinner.

SIMPLE DISTILLED WATERS.

A great number of d tilled waters were formerly kept in the

shops, and are still retained in some Dispensatories. But we consider them chiefly in the light of grateful diluents, suitable vehicles for medicines of greater efficacy, or for rendering disgustful ones more agreeable to the palate and stomach. We shall therefore insert only a few of those which are best adapted to these intentions. The management of a still being now generally understood, it is needless to spend time in giving directions for that purpose.

Cinnamon Water.—Steep one pound of cinnamon bark, bruised, in a gallon and a half of water, and one pint of brandy, for two days; and then distil off one gallon.—This is an agreeable aromatic water, possessing in a high degree the fragrance and cordial virtues of the spice.

Pennyroyal Water.—Take of pennyroyal leaves, dried, a pound and a half: water, from a gallon and a half to two gallons. Draw off by distillation one gallon.—This water possesses, in a considerable degree, the smell, taste, and virtues of the plant. It is given in mixtures and juleps to hysteric patients.—An infusion of the herb in boiling water answers nearly the same purposes.

Peppermint Water.—This is made in the same manner as the preceding.

Spearmint Water.—This may also be prepared in the same way as the pennyroyal water.—Both these are useful stomachic waters, and will sometimes relieve vomiting, especially when it proceeds from indigestion, or cold viscid phlegm. They are likewise useful in some colicky complaint, the gout in the stomach, &c., particularly the peppermint water. —An infusion of the fresh plant is frequently found to have the same effects as the distilled water.

Rose Water.—Take of roses, fresh gathered, six pound; water, two gallons. Distil off one gallon.—This water is principally valued on account of its fine flavour.

Jamaica Pepper Water.—Take of Jamaica pepper, half a pound; water, a gallon and a half. Distil off one gallon.—This is a very elegant distilled water, and may in most cases supply the place of the more costly spice waters.

SPIRITUOUS DISTILLED WATERS.

Spirituous Cinnamon Water.—Take cinnamon bark, one pound; proof spirit, and common water, of each one gallon. Steep the cinnamon in the liquor for two days; then distil off one gallon.

Spirituous Jamaica Pepper Water.—Take of Jamaica pepper, half a pound; proof spirit, three gallons; water, two gallons. Distil off three gallons.—This is a sufficiently-agreeable cordial, and may supply the place of the Aromatic Water.

WHEYS.

Alum Whey.—Boil two drachms of powdered alum in a pint of milk till it is curdled; then strain out the whey.—This whey is beneficial in an immoderate flow of the menses, and in a diabetes or excessive discharge of urine.—The dose is two, three, or four ounces, according as the stomach will bear it, three times a-day. If it should occasion vomiting, it may be diluted.

Mustard Whey.—Take milk and water, of each a pint; bruised mustard-seed, an ounce and a half. Boil them together till the curd is perfectly separated; afterwards strain the whey through a cloth.—This is the most elegant, and by no means the least efficacious, method of exhibiting mustard. It warms and invigorates the habit, and prometes the different secretions. Hence, in the low state of nervous fevers, it will often supply the place of wine. It is also of use in the chronic rheumatism, palsy, dropsy, &c. The addition of a little sugar will render it more agreeable.—The dose is an ordinary tea-cupful four or five times a-day.

Antiscorbutic Whey.—This whey is made by boiling half a pint of the antiscorbutic juices in a quart of cow's milk. More benefit, however, is to be expected from eating the plants than from their expressed juices.—The antiscorbutic plants are bitter oranges, brooklime, garden scurvy-grass, and water cresses.—A number of other wheys may be prepared nearly in the same manner, as orange whey, cream of tartar whey, &c. These are cooling pleasant drinks in fevers, and may be rendered cordial, when necessary, by the addition of wine.

WINES.

The effects of wine are, to raise the pulse, promote perspiration, warm the habit, and exhilarate the spirits. The red wines, besides these effects, have an astringent quality, by which they strengthen the tone of the stomach and intestines, and by this means prove serviceable in restraining immoderate secretions. The thin sharp wines have a different tendency: they pass off freely by the different emunctories, and gently open the body. The effects of the full-bodied wines are, however, much more durable than those of the thinner.

All sweet wines contain glutinous substance, and do not pass off freely. Hence they will heat the body more than an equal quantity of any other wine, though it should contain full as much spirit. From the obvious qualities of wine, it must appear to be an excellent cordial medicine. Indeed, to say the truth, it is worth all the rest put together. But to answer this character, it must be sound and good. No benefit is to be expected from the common trash that is often sold by the name of wine, without possessing one drop of the juice of the grape. Perhaps no medicine is more rarely obtained genuine than wine. Wine is not only used as a medicine, but is also employed as a menstruum for extracting the virtues of other medicinal substances; for which it is not ill adapted, being a compound of water, inflammable spirit, and acid; by which means it is enabled to act upon vegetable and animal substances, and also to dissolve some bodies of the metallic kind, so as to impregnate itself with their virtues, as steel, antimony, &c.

Anthelmintic Wine.—Take of rhubarb, half an ounce; worm-seed, an ounce. Bruise them, and infuse without heat in two pints of red port-wine for a few days, then strain off the wine.—As the stomachs of persons afflicted with worms are always debilitated, red wine alone will often prove serviceable: it must, however, have still better effects when joined with bitter and purgative ingredients, as in the above form.—A glass of this wine may be taken twice or thrice a-day.

Antimonial Wine.—Take a glass of antimony, reduced to a fine powder, half an ounce; Lisbon wine, twelve ounces. Digest, without heat, for twelve days, now and then shaking the bottle; afterwards filter the wine through paper.—The dose of this wine varies according to the intention. As an alterative and diaphoretic, it may be taken from ten to fifty or sixty drops. In a large dose it generally proves cathartic, or excites vomiting. Five to ten drops prove an emetic to children in the first month; and from ten to twenty-five, to children from three months to two years of age.

Bitter Wine.—Take of gentian root, yellow rind of lemon-peel, fresh, each one ounce; long pepper, two drachms; mountain wine, two pints. Infuse without heat for a week, and strain out the wine for use.—In complaints arising from weakness of the stomach, or indigestion, a glass of this wine may be taken an hour before dinner and supper.

Ipecacuanha Wine.—Take of ipecacuanha, in powder, one ounce; mountain wine, a pint. Infuse for three or four days; then filter the tincture.—This is a safe vomit, and answers extremely well for such persons as cannot swallow the powder, or whose stomachs are too irritable to bear it.—The dose is from one ounce to an ounce and a half. The dose for children, one, two, or three tea-spoonfuls, according to the age.

Chalybeate, or Wine of Iron.—Take filings of iron, two ounces; cinnamon and mace, of each two drachms; Rhenish wine, two pints. Infuse for three or four weeks, frequently shaking the bottle; then pass the wine through a filter.—In obstructions of the menses, this preparation of iron may be taken, in the dose of half a wine-glass twice or thrice a-day. The medicine would probably be as good if made with Lisbon wine sharpened with half an ounce of the cream of tartar, or a small quantity of the diluted vitriolic acid.

Stomach Wine.—Take of cinchona bark, grossly powdered, an ounce; cardamon seeds, and orange-peel, bruised, of each two drachms. Infuse in a bottle of white port or Lisbon wine for five or six days; then strain off the wine.—This wine is not only of service in debility of the stomach and intestines, but may also be taken as a preventive by persons liable to the intermittent fever, or who reside in places where this disease prevails. It will be of use likewise to those who recover slowly after fevers of any kind, as it assists digestion, and helps to restore the tone and vigour of the system.—A glass of it may be taken two or three times a-day.

A GLOSSARY.

ALTHOUGH terms of art have been sedulously avoided in the composition of this work, and in the various additions that we have subjoined, it is impossible entirely to banish technical phrases when writing on medicine; and as several persons expressed their opinion that a Glossary would render the book more generally intelligible, the following concise explanation of the few terms of art that occur is added, in compliance with their sentiments, and to fulfil the original intention of this treatise, by rendering it intelligible and useful to all ranks and classes of the community.

Abdomen. The belly.

Abscess. A tumor or swelling in the body, in which collected matter degenerates into pus.

Absorbents. Glands, or vessels, that convey the nourishment from the intestines, and the secreted fluids from the various cavities, into the mass of blood.

Absorbents. Medicines that ease the asperity of pungent humours, or dry away superfluous moisture in the body.

Acescent. Sour; sharp; tending to sourness.

Acrimony. Corrosive sharpness.

Acute. A disease, the symptoms of which are violent, and tend to a speedy termination, is called acute.

Adult. Of mature age.

Adust. Dry, warm.

Alvine, or Aivus. Of or relating to the lower cavity of the belly.

Anasarca. A species of dropsy from a serous humour spread between the skin and flesh, or rather a general accumulation of lymph in the cellular system.

Anodyne. A medicine that relieves pain.

Anorexia. That disorder in the stomach which creates a loathing and want of appetite.

Anthelmintic. A medicine to destroy worms.

Antiemetics. Medicines which stop vomiting.

Antiseptic. Preventive of putrefaction.

Antispasmodic. Whatever tends to prevent or remove spasm.

Aperient. Opening; gently purgative.

Aphthæ. Small whitish ulcers or inflammatory exudations appearing in the mouth.

Arthritic. Gouty; painful affections of the joints.

Ascites. Dropsy of the belly.

Astriction. A tightening or lessening.

Atrabiliary, or Atrabilarian. An epithet commonly applied to people of a certain temperament, marked by a dark complexion, black hair, spare habit, &c., which the ancients supposed to arise from atra-bilis, or the black bile.

Atrophy. A species of consumption, when the body or some member of it is not nourished, but decays and wastes away gradually.
Attenuant. Such medicines as open the pores of the body, and render more fluid thick and glutinous humours.
Bile, or Gall. A fluid which is secreted by the liver into the gall-bladder, and from thence passes into the intestines, in order to promote digestion.
Bronchotomy. That operation which opens the wind-pipe by incision, to prevent suffocation.
Bronchia. The branches of the wind-pipe dispersed through the lungs.
Bubo. A tumor with inflammation in the groin.
Cacochymy. An unhealthy state of the body.
Capillary Vessels. The smallest branches of the veins and arteries.
Caries. A rottenness of the bone.
Cathartics. Purges.
Chronic. A disease whose progress is slow, in opposition to acute.
Chyle. A milky fluid separated from the aliment in the intestines, and conveyed by the absorbents into the blood, to supply the waste of the animal body.
Circulation. The motion of the blood, which is driven by the heart through the arteries, and returns by the veins.
Colliquative Evacuations. Dangerous fluxes with profuse clammy sweats
Comatose. Sleepy.
Constipation. A constriction, or binding together.
Conglobate Gland. A simple gland.
Conglomerate. A compound gland.
Contagion. Infectious matter.
Crisis. A certain period in the progress of a disease, from whence a decided alteration, either for the better or the worse, takes place.
Critical. Decisive, or important.
Critical Days. The fourth, fifth, seventh, ninth, eleventh, thirteenth, fourteenth, seventeenth, and twenty-first, are by some authors denominated critical days, because febrile complaints have been observed to take a decisive change in these periods.
Cruciform. In botany, a plant having a flower consisting of four petals disposed in the form of a cross.
Cucurbitaceous. In botany, a species of gourd.
Cutis, or Cuticle. The skin.
Cutaneous. Of or belonging to the skin.
Debility. Weakness; feebleness; decay of strength.
Delirium. A temporary derangement of the mental faculties.
Deleterious. Deadly; destructive.
Desiccative. Drying; tending to dry.
Diaphoretic. Heating; exciting perspiration.
Diaphragm. A membrane separating the cavity of the chest from tha of the belly.
Diarrhœa. A flux, or looseness of the belly.
Diuretic. A medicine that promotes the secretion of urine.
Drastic. Is applied to such purgative medicines as are violent or harsh in their operation.
Dyspepsia. A difficulty of digestion, or rather a depraved one; as

when what is digested becomes acid, or possessed of other morbid qualities.

Dyspnœa. A difficulty in breathing.

Dysuria, or Dysury. A difficulty or heat in voiding urine.

Eccoprotics. Such medicines as gently purge the body.

Efflorescence. A spot, or eruptive appearance.

Emmenagogue. Medicines which excite the menstrual discharge.

Emollient. Softening.

Empyreumatic. A smell resembling that of burnt substances.

Endemic. A disease peculiar to a certain district of country.

Enema, Clyster, or Lavement, are equivalent with each other, and signify any liquid medicine injected into the anus.

Epidemic. A disease generally infectious.

Errhine. Medicines to snuff up the nose, and that, by causing sneezing, purge the head.

Exacerbation. The increase of any disease.

Exanthemata. Certain wheals or breakings out on the body; efflorescences, or pustules.

Fæces. Excrements.

Flatulent. Producing wind.

Fœtid. Emitting an offensive smell.

Fœtus. The child before birth, or when born before the proper period, is thus termed.

Formula. A prescription

Fungus. Proud flesh.

Gangrene. Mortification in its first beginning; caused by a stoppage of the circulation, followed by putrefaction.

Gestation. The time of a woman's going with child.

Glottis. Is that chink of the larynx that lies at the root of the tongue.

Gonorrhœa. A morbid running of venereal virus from the privities.

Gummata. } Venereal excrescences.
Ganglia. }

Gymnastic. Exercise taken with a view to preserve or restore health. The ancient physicians reckoned this an important branch of medicine.

Hæmoptoe. } A spitting of blood from the lungs.
Hæmoptysis. }

Hæmorrhoids. The piles.

Hæmorrhage. Discharge of blood.

Hectic Fever. A slow consuming fever, generally attending a bad habit of body, or some incurable and deep-rooted disease.

Herculean. Powerful; of the greatest force.

Hypochondriacism. Low spirits.

Hypochondriac Viscera. The liver, spleen, &c.; so termed from their situation in the hypochondriac, or upper and lateral parts of the belly.

Ichor. Thin bad matter.

Imposthume. A collection of purulent matter.

Inflammation. A surcharge of blood, and an increased action of the vessels, in any particular part of the body.

Inguinal. Has reference to what is commonly called the groin.

LAVEMENT. See ENEMA.

Ligature. Bandage.

Lixivium. Ley.
Lohoch, or Linctus. A medicine to be licked by the tongue, or swallowed slowly.
Mamma. The nipple.
Mammæ. The breasts.
Mediastinum. A double membrane that divides the thorax or breast into two parts.
Miliary Eruption. Eruption of small pustules, resembling the seeds of millet.
Morbid. } Causing disease, or diseased.
Morbific. }
Mucus. The matter discharged from the nose, lungs, &c.
Mysentery. A double membrane which connects the intestines to the back bone, and about which they are involved.
Narcotic. A stupifying opiate.
Nausea. An inclination to vomit.
Nephritic. A disease belonging to the kidneys and bladder.
Nephritics. Are those medicines that have a tendency to break or dissolve stony concretions.
Nervous. Irritable.
Nodes. An enlargement of the bones produced by the venereal disease.
Papilionaceous. Having amulgent vessels like a nipple.
Paroxysm. A fit, or the periodical return of a fit, of a disease.
Pectoral. Medicines adapted to cure diseases of the breast.
Perennial. Durable, perpetual.
Perspiration. The matter discharged from the pores of the skin in the form of vapour or sweat.
Peritonæum. A membrane lining the cavity of the belly, and covering the intestines.
Pericardium. A membranous bag containing the heart.
Petechial. Small spots on the skin, like flea-bites, which come out in some fevers.
Phlebotomy. The art or operation of letting blood.
Phlegmon. An inflamed tumor, accompanied with heat, redness, and throbbing pain.
Phlegmatic. Watery; relaxed.
Phlogiston. Is here used to signify somewhat rendering the air unfit for respiration.
Phthisis Pulmonalis. Consumption of the lungs.
Plethoric. Replete with blood.
Polypus. A diseased excrescence, or a substance formed of coagulable lymph, frequently found in the large blood-vessels.
Præcordia. The parts about the heart.
Prolapsus Ani. The falling down of the fundament.
Prolapsus Uteri. The falling down of the womb.
Pus. Matter contained in a boil.
Rectum. The straight gut, in which the fæces are contained.
Refrigerant. Cooling; refreshing.
Regimen. Regulation of diet.
Respiration. The act of breathing.
Restringent. Binding.

Saliva. The fluid secreted by the glands of the mouth.
Sanies. A thin bad matter, discharged from an ill-conditioned ulcer.
Schirrous. A state of diseased hardness.
Sedative. Composing, easing, antispasmodic.
Slough. A part separated and thrown off by suppuration.
Sordes. Filth; dregs.
Spine. The back-bone.
Sternutatory. Causing to sneeze.
Sternum. The breast-bone which is situated in the middle of the breast.
Styptic. A medicine for stopping the discharge of blood.
Sub-acid. Rather acid; somewhat sour or tart.
Succedaneum. A substitute for another article.
Syncope. A fainting fit attended with a complete abolition of sense and motion.
Syphilitic. Venereal.
Tabes. A species of consumption.
Temperament. A peculiar habit of body, of which there are generally reckoned four; viz. the sanguine; the bilious; the melancholic; and phlegmatic.
Tenesmus. A continual desire of going to stool, attended with an inability of voiding any thing except bloody slimy matter.
Vaccine. Of or belonging to a cow.
Variolous. Of or resembling the small-pox, a distemper that is so variously diversified, that it requires various methods of management.
VENESECTION. See PHLEBOTOMY.
Vermifuge. A medicine to expel worms.
Vertigo. Giddiness.
Vesicatory. A blistering application.
Viscera. The bowels, entrails. The heart, liver, lungs, &c., are so called.
Ulcer. An ill-conditioned sore.
Umbelliferous. Having umbilical vessels, in reference to the navel. There are four ligamentary vessels called by that name.
Ureters. Two long and small canals which convey the urine from the kidneys to the bladder.
Urethra. The canal which conveys the urine from the bladder.

INDEX.

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